

DRAFT SUBSEQUENT ENVIRONMENTAL IMPACT REPORT

POINT MOLATE MIXED-USE DEVELOPMENT PROJECT



FEBRUARY 2020

PREPARED FOR:

City of Richmond
450 Civic Center Plaza
Richmond, CA 94804

PREPARED BY:

Analytical Environmental Services
1801 7th Street, Suite 100
Sacramento, CA 95811
(916) 447-3479
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TABLE OF CONTENTS

Subsequent Environmental Impact Report Sections

1.0 INTRODUCTION	1-1
1.1 OVERVIEW	1-1
1.2 ENVIRONMENTAL REVIEW CONTEXT	1-1
1.2.1 Previous Planning and Environmental Review	1-1
1.2.1.1 1997 Point Molate Reuse Plan	1-1
1.2.1.2 2002 Navy EIS/EIR	1-1
1.2.1.3 2011 FEIR	1-2
1.2.2 Standard for Determining if Further Environmental Review is Required	1-4
1.3 CEQA PROCESS AND PUBLIC REVIEW OPPORTUNITIES	1-5
1.3.1 Lead Agency	1-5
1.3.1.1 Known Responsible and Trustee Agencies	1-5
1.3.2 Notice of Preparation and Scoping	1-5
1.3.3 Draft SEIR and Public Review	1-6
1.3.4 Final SEIR and SEIR Certification	1-6
1.3.4.1 Certification of the SEIR and Project Consideration	1-7
1.3.4.2 Mitigation Monitoring and Reporting Program	1-7
1.4 SCOPE OF THE SEIR	1-7
1.4.1 Project Modifications Since Publication of the NOP	1-7
1.4.2 Resource Areas Addressed in this SEIR	1-8
1.4.3 Issues and Concerns Raised During Scoping	1-8
1.4.3.1 CEQA Process	1-9
1.4.3.2 Baseline	1-9
1.4.3.3 Aesthetics	1-9
1.4.3.4 Air Quality and Global Climate Change	1-9
1.4.3.5 Biological Resources	1-10
1.4.3.6 Cultural Resources and Tribal Cultural Resources	1-10
1.4.3.7 Geology, Soils, and Mineral Resources	1-10
1.4.3.8 Hazards, Hazardous Materials, and Wildfire	1-10
1.4.3.9 Hydrology and Water Quality	1-10
1.4.3.10 Land Use and Planning	1-10
1.4.3.11 Noise	1-11
1.4.3.12 Population and Housing	1-11
1.4.3.13 Public Services and Recreation	1-11
1.4.3.14 Transportation	1-11
1.4.3.15 Utilities and Service Systems	1-12
1.4.3.16 Alternatives	1-12
1.4.3.17 Other Issues Raised During Scoping	1-12
1.4.4 Incorporation by Reference and Reference Documents	1-13
1.5 REPORT ORGANIZATION	1-14
2.0 EXECUTIVE SUMMARY	2-1
2.1 INTRODUCTION	2-1
2.2 PROJECT LOCATION	2-1
2.3 PROJECT OBJECTIVES	2-1
2.4 PROJECT UNDER REVIEW	2-2
2.5 MODIFIED PROJECT IMPACTS	2-3
2.6 ALTERNATIVES TO THE MODIFIED PROJECT	2-4
2.7 AREAS OF CONTROVERSY AND SCOPING COMMENTS	2-4
2.8 ISSUES TO BE RESOLVED	2-5

3.0 PROJECT DESCRIPTION	3-1
3.1 INTRODUCTION	3-1
3.2 PROJECT SITE DESCRIPTION.....	3-1
3.2.1 Project Location	3-1
3.2.2 Former and Existing Uses.....	3-1
3.2.3 Existing General Plan and Zoning	3-5
3.2.4 Existing Site Characteristics	3-5
3.2.4.1 Existing Historic Facilities.....	3-5
3.2.4.2 Existing Utilities	3-8
3.2.4.3 Existing Site Access and Circulation.....	3-10
3.2.4.4 Natural Site Characteristics.....	3-10
3.2.5 Surrounding Land Use and Development.....	3-12
3.2.6 Deed Restrictions.....	3-12
3.2.7 Tidelands Trust/State Lands	3-15
3.3 PROJECT OBJECTIVES	3-15
3.4 MODIFIED PROJECT	3-17
3.4.1 Overview and Development Program	3-17
3.4.2 Recreation and Open Space Uses	3-21
3.4.3 Vehicle Access, Circulation, and Parking	3-25
3.4.3.1 Site Access (Stenmark Drive)	3-25
3.4.3.2 Internal Circulation and Parking	3-25
3.4.3.3 Pedestrian and Bike Facilities	3-25
3.4.3.4 Transportation Demand Management Program	3-28
3.4.4 Pier Reuse	3-28
3.4.4.1 Pier Reconfiguration.....	3-30
3.4.4.2 Pier Improvements	3-30
3.4.4.3 Pier-Related Facilities	3-30
3.4.4.4 Public Walkways and Shuttle Service	3-30
3.4.5 Emergency Facilities	3-30
3.4.6 Utilities and Service Systems.....	3-32
3.4.6.1 Water Supply	3-32
3.4.6.2 Wastewater	3-33
3.4.6.3 Storm Drainage Systems	3-34
3.4.6.4 Solid Waste	3-34
3.4.6.5 Electrical and Natural Gas Service.....	3-39
3.5 CONSTRUCTION.....	3-39
3.5.1 Grading	3-40
3.5.2 Hazardous Materials Remediation.....	3-40
3.5.2.1 IR Site 1: Landfill Area	3-42
3.5.2.2 IR Site 2: Sand Black Grit Areas.....	3-42
3.5.2.3 IR Site 3: Treatment Ponds Area	3-43
3.5.2.4 IR Site 4: Drum Lot 1, Drum Lot 2 and Building 87.....	3-43
3.5.2.5 Storage Tanks	3-44
3.5.2.6 Electrical Transformers	3-46
3.5.2.7 Former Small Arms Firing Range.....	3-46
3.5.2.8 Lead-Based Paint.....	3-46
3.5.2.9 Asbestos-Containing material and Other Hazardous Building Materials	3-47
3.5.2.10 Groundwater Monitoring.....	3-47
3.5.2.11 Railroad Tracks	3-47
3.6 PERMITS AND APPROVALS	3-48

4.0 ENVIRONMENTAL ANALYSIS	4-1
4.0.1 SCOPE OF THE ANALYSIS	4-1
4.0.2 FORMAT AND CONTENT OF EACH ANALYSIS SECTION	4-1
4.0.3 APPROACH TO THE ANALYSIS	4-2
4.0.3.1 Project Study Area	4-2
4.0.3.2 Environmental Setting Baseine.....	4-3
4.0.3.3 Environmental Impact Analysis.....	4-4
4.0.3.4 Comparative Impact Determinations in this Draft SEIR	4-6
4.1 AESTHETICS.....	4.1-1
4.1.1 Introduction	4.1-1
4.1.2 Regulatory Setting	4.1-1
4.1.2.1 State	4.1-1
4.1.2.2 Local	4.1-1
4.1.2.3 City of Richmond General Plan 2030.....	4.1-4
4.1.2.4 City of Richmond Zoning Ordinance	4.1-8
4.1.3 Environmental Setting	4.1-10
4.1.3.1 Regional Setting	4.1-11
4.1.3.2 Project Site Vicinity Setting	4.1-11
4.1.3.3 Project Site Visual Resources.....	4.1-11
4.1.3.4 Scenic Vistas, Resources, and Corridors	4.1-20
4.1.4 2011 FEIR Analysis	4.1-21
4.1.4.1 2011 FEIR Summary of Impacts	4.1-21
4.1.4.2 Changes Since the 2011 FEIR.....	4.1-22
4.1.5 Impacts.....	4.1-22
4.1.5.1 Thresholds of Significance	4.1-22
4.1.5.2 Method of Analysis	4.1-23
4.1.5.3 Effects Found Not to be Significant Without Further Analysis	4.1-23
4.1.5.4 Project-Level Impacts.....	4.1-28
4.1.5.5 Cumulative Impacts.....	4.1-35
4.1.6 Mitigation Measures	4.1-35
4.2 AIR QUALITY AND GREENHOUSE GAS EMISSIONS.....	4.2-1
4.2.1 Introduction	4.2-1
4.2.2 Regulatory Setting	4.2-1
4.2.2.1 Criteria Pollutants	4.2-1
4.2.2.2 Greenhouse Gas Emissions	4.2-8
4.2.3 Environmental Setting	4.2-21
4.2.3.1 Regional Meteorology	4.2-21
4.2.3.2 Regional Air Quality	4.2-22
4.2.3.3 NAAQS and CAAQS Designations	4.2-22
4.2.3.4 Sensitive Receptors	4.2-23
4.2.3.5 Greenhouse Gas Emissions and Climate Change	4.2-23
4.2.4 2011 FEIR Analysis	4.2-27
4.2.4.1 2011 FEIR Summary of Impacts	4.2-27
4.2.4.2 Changes Since the 2011 FEIR.....	4.2-28
4.2.5 Impacts.....	4.2-28
4.2.5.1 Thresholds of Significance	4.2-28
4.2.5.2 Method of Analysis	4.2-29
4.2.5.3 Effects Found Not to be Significant Without Further Analysis	4.2-38
4.2.5.4 Project-Level Impacts.....	4.2-38
4.2.6 Mitigation Measures	4.2-52
4.2.6.1 Modified Project.....	4.2-52
4.2.6.2 Construction of the Bay Trail.....	4.2-55
4.3 BIOLOGICAL RESOURCES.....	4.3-1
4.3.1 Introduction	4.3-1
4.3.2 Regulatory Setting	4.3-1

4.3.2.1	Federal	4.3-1
4.3.2.2	State	4.3-3
4.3.2.3	Local	4.3-6
4.3.3	Environmental Setting	4.3-12
4.3.3.1	Methods	4.3-12
4.3.3.2	Habitat Types	4.3-13
4.3.3.3	Wetlands and Waters of the U.S.	4.3-19
4.3.3.4	Special-Status Species	4.3-19
4.3.3.5	Invasive Species and Disease Vectors	4.3-57
4.3.4	2011 FEIR Analysis	4.3-58
4.3.4.1	2011 FEIR Summary of Impacts	4.3-58
4.3.4.2	Changes Since the 2011 FEIR	4.3-59
4.3.5	Impacts	4.3-61
4.3.5.1	Thresholds of Significance	4.3-61
4.3.5.2	Method of Analysis	4.3-62
4.3.5.3	Effects Found Not to be Significant Without Further Analysis	4.3-62
4.3.5.4	Project-Level Impacts	4.3-63
4.3.5.5	Cumulative Impacts	4.3-87
4.3.6	Mitigation Measures	4.3-89
4.4	CULTURAL RESOURCES AND TRIBAL CULTURAL RESOURCES	4.4-1
4.4.1	Introduction	4.4-1
4.4.2	Regulatory Setting	4.4-1
4.4.2.1	Federal	4.4-1
4.4.2.2	State	4.4-3
4.4.2.3	Local	4.4-5
4.4.3	Environmental Setting	4.4-9
4.4.3.1	Prehistoric Setting	4.4-9
4.4.3.2	Historic Setting	4.4-10
4.4.4	Research Methods and Results	4.4-18
4.4.4.1	Winehaven Historic District and the NRD (CA-CCO-422H)	4.4-20
4.4.4.2	Richmond Belt Line Railway	4.4-22
4.4.4.3	Richmond-San Rafael Bridge	4.4-22
4.4.4.4	Chinese Shrimp Camp (CA-CCO-506H)	4.4-22
4.4.4.5	CA-CCO-282	4.4-22
4.4.4.6	CA-CCO-283	4.4-23
4.4.4.7	CA-CCO-284	4.4-24
4.4.4.8	CA-CCO-423	4.4-24
4.4.4.9	Summary of Cultural Resources within the Study Area	4.4-25
4.4.5	Native American Consultation Program	4.4-25
4.4.5.1	AB 52 and SB 18 Consultation	4.4-26
4.4.5.2	AB 52 Consultation and Tribal Cultural Resources	4.4-26
4.4.6	2011 FEIR Analysis	4.4-26
4.4.6.1	2011 FEIR Summary of Impacts	4.4-26
4.4.6.2	Changes Since the 2011 FEIR	4.4-27
4.4.7	Impacts	4.4-28
4.4.7.1	Thresholds of Significance	4.4-28
4.4.7.2	Method of Analysis	4.4-30
4.4.7.3	Effects Found Not to be Significant without Further Analysis	4.4-30
4.4.7.4	Project-Level Impacts	4.4-30
4.4.7.5	Cumulative Impacts	4.4-36
4.4.8	Mitigation Measures	4.4-38
4.5	ENERGY	4.5-1
4.5.1	Introduction	4.5-1
4.5.2	Regulatory Setting	4.5-1
4.5.2.1	Federal	4.5-1
4.5.2.2	State	4.5-2

4.5.2.3	Local	4.5-4
4.5.3	Environmental Setting	4.5-7
4.5.3.1	State	4.5-7
4.5.3.2	Pacific Gas and Electric Company	4.5-8
4.5.3.3	Local	4.5-11
4.5.4	2011 FEIR Analysis	4.5-11
4.5.4.1	2011 FEIR Summary of Impacts	4.5-11
4.5.4.2	Changes Since the 2011 FEIR	4.5-11
4.5.5	Impacts	4.5-12
4.5.5.1	Thresholds of Significance	4.5-12
4.5.5.2	Method of Analysis	4.5-12
4.5.5.3	Effects Found Not to be Significant Without Further Analysis	4.5-12
4.5.5.4	Project-Level Impacts	4.5-12
4.5.6	Mitigation Measures	4.5-17
4.6	GEOLOGY, SOILS, AND MINERAL RESOURCES	4.6-1
4.6.1	Introduction	4.6-1
4.6.2	Regulatory Setting	4.6-1
4.6.2.1	Federal	4.6-1
4.6.2.2	State	4.6-2
4.6.2.3	Local	4.6-5
4.6.3	Environmental Setting	4.6-7
4.6.3.1	Topography	4.6-8
4.6.3.2	Geology	4.6-8
4.6.3.3	Soils	4.6-8
4.6.3.4	Seismicity	4.6-10
4.6.3.5	Mineral Resources	4.6-15
4.6.3.6	Paleontological Environmental Setting	4.6-15
4.6.4	2011 FEIR Analysis	4.6-16
4.6.4.1	2011 FEIR Summary of Impacts	4.6-16
4.6.4.2	Changes Since the 2011 FEIR	4.6-17
4.6.5	Impacts	4.6-17
4.6.5.1	Thresholds of Significance	4.6-17
4.6.5.2	Method of Analysis	4.6-18
4.6.5.3	Effects Found Not to be Significant Without Further Analysis	4.6-18
4.6.5.4	Project-Level Impacts	4.6-19
4.6.5.5	Cumulative Impacts	4.6-24
4.6.6	Mitigation Measures	4.6-25
4.7	HAZARDS, HAZARDOUS MATERIALS, AND WILDFIRE	4.7-1
4.7.1	Introduction	4.7-1
4.7.2	Regulatory Setting	4.7-1
4.7.2.1	Federal	4.7-1
4.7.2.2	State	4.7-4
4.7.2.3	Local	4.7-7
4.7.3	Environmental Setting	4.7-10
4.7.3.1	Hazardous Materials	4.7-10
4.7.3.2	Hazards	4.7-21
4.7.3.3	Wildfire Hazards	4.7-23
4.7.4	2011 FEIR Analysis	4.7-24
4.7.4.1	2011 FEIR Summary of Impacts	4.7-24
4.7.4.2	Changes Since the 2011 FEIR	4.7-27
4.7.5	Impacts	4.7-28
4.7.5.1	Thresholds of Significance	4.7-28
4.7.5.2	Method of Analysis	4.7-28
4.7.5.3	Effects Found Not to be Significant Without Further Analysis	4.7-29
4.7.5.4	Project-Level Impacts	4.7-30
4.7.5.5	Cumulative Impacts	4.7-50

4.7.6	Mitigation Measures	4.7-52
4.7.6.1	Construction of the Bay Trail	4.7-53
4.8	HYDROLOGY AND WATER QUALITY	4.8-1
4.8.1	Introduction	4.8-1
4.8.2	Regulatory Setting	4.8-1
4.8.2.1	Federal	4.8-1
4.8.2.2	State	4.8-3
4.8.2.3	Local	4.8-6
4.8.3	Environmental Setting	4.8-13
4.8.3.1	Watershed	4.8-13
4.8.3.2	Precipitation	4.8-15
4.8.3.3	Drainage	4.8-15
4.8.3.4	Flooding	4.8-15
4.8.3.5	Groundwater Basin	4.8-19
4.8.3.6	Water Quality	4.8-19
4.8.4	2011 FEIR Analysis	4.8-20
4.8.4.1	2011 FEIR Summary of Impacts	4.8-20
4.8.4.2	Changes Since the 2011 FEIR	4.8-22
4.8.5	Impacts	4.8-22
4.8.5.1	Thresholds of Significance	4.8-22
4.8.5.2	Method of Analysis	4.8-23
4.8.5.3	Effects Found Not to be Significant Without Further Analysis	4.8-23
4.8.5.4	Project-Level Impacts	4.8-24
4.8.5.5	Cumulative Impacts	4.8-35
4.8.6	Mitigation Measures	4.8-37
4.8.6.1	Construction of the Bay Trail	4.8-40
4.9	LAND USE AND PLANNING	4.9-1
4.9.1	Introduction	4.9-1
4.9.2	Regulatory Setting	4.9-1
4.9.2.1	Federal	4.9-1
4.9.2.2	State	4.9-1
4.9.2.3	Local	4.9-1
4.9.3	Environmental Setting	4.9-18
4.9.3.1	Former and Existing Uses of the Project Site	4.9-18
4.9.3.2	Surrounding Land Uses	4.9-20
4.9.4	2011 FEIR Analysis	4.9-22
4.9.4.1	2011 FEIR Summary of Impacts	4.9-22
4.9.4.2	Changes Since the 2011 FEIR	4.9-23
4.9.5	Impacts	4.9-23
4.9.5.1	Thresholds of Significance	4.9-23
4.9.5.2	Method of Analysis	4.9-23
4.9.5.3	Effects Found Not to be Significant Without Further Analysis	4.9-23
4.9.5.4	Project-Level Impacts	4.9-24
4.9.5.5	Cumulative Impacts	4.9-28
4.9.6	Mitigation Measures	4.9-28
4.10	NOISE	4.10-1
4.10.1	Introduction	4.10-1
4.10.2	Regulatory Setting	4.10-1
4.10.2.1	Federal	4.10-1
4.10.2.2	State	4.10-1
4.10.2.3	Local	4.10-1
4.10.3	Environmental Setting	4.10-7
4.10.3.1	Acoustical Background and Terminology	4.10-8
4.10.3.2	Noise Exposure and Community Noise	4.10-8
4.10.3.3	Effects of Noise on People	4.10-9
4.10.3.4	Existing Noise Sources	4.10-11

4.10.3.5	Existing Vibration Sources	4.10-15
4.10.3.6	Sensitive Receptors	4.10-16
4.10.4	2011 FEIR Analysis	4.10-16
4.10.4.1	2011 FEIR Summary of Impacts	4.10-16
4.10.4.2	Changes Since the 2011 FEIR.....	4.10-17
4.10.5	Impacts.....	4.10-17
4.10.5.1	Thresholds of Significance	4.10-17
4.10.5.2	Method of Analysis	4.10-18
4.10.5.3	Noise Within the Project	4.10-19
4.10.5.4	Effects Found Not to be Significant Without Further Analysis	4.10-20
4.10.5.5	Project-Level Impacts.....	4.10-21
4.10.5.6	Noise Within the Project.....	4.10-30
4.10.5.7	Cumulative Impacts.....	4.10-32
4.10.6	Mitigation Measures	4.10-33
4.11	POPULATION AND HOUSING.....	4.11-1
4.11.1	Introduction	4.11-1
4.11.3	Environmental Setting	4.11-1
4.11.3.1	Population	4.11-1
4.11.3.2	Housing	4.11-2
4.11.2	Regulatory Setting	4.11-3
4.11.2.1	Regional Housing Needs Allocation.....	4.11-3
4.11.2.2	City of Richmond General Plan.....	4.11-4
4.11.2.3	Point Molate Reuse Plan.....	4.11-7
4.11.2.4	San Francisco Bay Plan.....	4.11-7
4.11.4	2011 FEIR Analysis	4.11-7
4.11.4.1	2011 FEIR Summary of Impacts	4.11-7
4.11.4.2	Changes Since the 2011 FEIR.....	4.11-8
4.11.5	Impacts.....	4.11-8
4.11.5.1	Thresholds of Significance	4.11-8
4.11.5.2	Method of Analysis	4.11-9
4.11.5.3	Effects Found Not to be Significant Without Further Analysis	4.11-9
4.11.5.4	Project-Level Impacts.....	4.11-10
4.11.5.5	Cumulative Impacts.....	4.11-12
4.11.6	Mitigation Measures	4.11-13
4.12	PUBLIC SERVICES AND RECREATION	4.12-1
4.12.1	Introduction	4.12-1
4.12.2	Regulatory Setting	4.12-1
4.12.2.1	Federal	4.12-1
4.12.2.2	State	4.12-1
4.12.2.3	Local	4.12-2
4.12.3	Environmental Setting	4.12-11
4.12.3.1	Fire Protection and Emergency Services.....	4.12-11
4.12.3.2	Police Services.....	4.12-13
4.12.3.3	Public Schools.....	4.12-14
4.12.3.4	Parks and Recreation.....	4.12-15
4.12.3.5	Other Public Services.....	4.12-16
4.12.4	2011 FEIR Analysis	4.12-16
4.12.4.1	2011 FEIR Summary of Impacts	4.12-16
4.12.4.2	Changes Since the 2011 FEIR.....	4.12-19
4.12.5	Impacts.....	4.12-19
4.12.5.1	Thresholds of Significance	4.12-19
4.12.5.2	Method of Analysis	4.12-20
4.12.5.3	Effects Found Not to be Significant Without Further Analysis	4.12-20
4.12.5.4	Project-Level Impacts.....	4.12-22
4.12.5.5	Cumulative Impacts.....	4.12-27
4.12.6	Mitigation Measures	4.12-28

4.13	TRANSPORTATION	4.13-1
4.13.1	Introduction	4.13-1
4.13.2	Regulatory Setting	4.13-1
4.13.2.1	State	4.13-1
4.13.2.2	Local	4.13-2
4.13.3	Environmental Setting	4.13-9
4.13.3.1	Existing Circulation Network	4.13-9
4.13.3.2	Bicycle and Pedestrian Facilities	4.13-12
4.13.3.3	Transit	4.13-12
4.13.4	2011 FEIR Analysis	4.13-14
4.13.4.1	2011 FEIR Summary of Impacts	4.13-14
4.13.4.2	Changes Since the 2011 FEIR	4.13-17
4.13.5	Impacts	4.13-17
4.13.5.1	Thresholds of Significance	4.13-17
4.13.5.2	Method of Analysis	4.13-18
4.13.5.3	Effects Found Not to be Significant Without Further Analysis	4.13-27
4.13.5.4	Project-Level Impacts	4.13-31
4.13.5.5	Cumulative Impacts	4.13-41
4.13.6	Mitigation Measures	4.13-46
4.14	UTILITIES AND SERVICE SYSTEMS	4.14-1
4.14.1	Introduction	4.14-1
4.14.2	Regulatory Setting	4.14-1
4.14.2.1	Water	4.14-1
4.14.2.2	Wastewater and Stormwater Collection and Treatment	4.14-6
4.14.2.3	Solid Waste	4.14-7
4.14.3	Environmental Setting	4.14-8
4.14.3.1	Stormwater	4.14-8
4.14.3.2	Municipal Water Supply	4.14-9
4.14.3.3	Wastewater Service	4.14-10
4.14.3.4	Solid Waste Service	4.14-13
4.14.3.5	Electricity, Natural Gas, and Telecommunications	4.14-13
4.14.4	2011 FEIR Analysis	4.14-14
4.14.4.1	2011 FEIR Summary of Impacts	4.14-14
4.14.4.2	Changes Since the 2011 FEIR	4.14-15
4.14.5	Impacts	4.14-16
4.14.5.1	Thresholds of Significance	4.14-16
4.14.5.2	Method of Analysis	4.14-16
4.14.5.3	Effects Found Not to be Significant Without Further Analysis	4.14-16
4.14.5.4	Project-Level Impacts	4.14-18
4.14.5.5	Cumulative Impacts	4.14-28
4.14.6	Mitigation Measures	4.14-29
5	CEQA CONSIDERATIONS	5-1
5.1	INTRODUCTION	5-1
5.2	INDIRECT AND GROWTH-INDUCING IMPACTS	5-1
5.2.1	Extension of Urban Services or Infrastructure	5-2
5.2.2	Extension of Transportation Corridor	5-2
5.2.3	Removal of Obstacles to Population Growth	5-3
5.2.4	Conclusions	5-4
5.3	SECONDARY EFFECTS FROM MITIGATION MEASURES	5-4
5.3.1	Secondary Effects from Mitigation Measure 4.13-1	5-4
5.3.1.1	Biological Resources	5-6
5.3.1.2	Cultural Resources and Tribal Cultural Resources	5-6
5.3.2	Secondary Effects from Mitigation Measure 4.14-2	5-7
5.4	CUMULATIVE IMPACT ANALYSIS	5-7
5.4.1	Introduction	5-7

5.4.2	Approach	5-9
5.4.3	Cumulative Context	5-9
5.4.3.1	Cumulative Land Use and Infrastructure Assumptions	5-9
5.4.3.2	Proposed and Anticipated Development	5-12
5.4.3.3	Geographic Scope	5-16
5.4.4	Summary of Cumulatively Considerable Impacts	5-16
5.4.4.1	Aesthetics	5-16
5.4.4.2	Air Quality and Greenhouse Gas Emissions	5-17
5.4.4.3	Biological Resources	5-18
5.4.4.4	Cultural Resources and Tribal Cultural Resources	5-18
5.4.4.5	Energy	5-18
5.4.4.6	Geology, Soils, and Minerals	5-18
5.4.4.7	Hazards, Hazardous Materials, and Wildfire	5-18
5.4.4.8	Hydrology and Water Quality	5-18
5.4.4.9	Land Use and Planning	5-18
5.4.4.10	Noise	5-18
5.4.4.11	Population and Housing	5-19
5.4.4.12	Public Services and Recreation	5-19
5.4.4.13	Transportation	5-19
5.4.4.14	Utilities and Service Systems	5-19
5.5	SIGNIFICANT AND UNAVOIDABLE IMPACTS	5-20
5.5.1	Air Quality and Greenhouse Gas Emissions	5-20
5.5.2	Transportation	5-20
5.6	IRREVERSIBLE CHANGES	5-21
6	ANALYSIS OF ALTERNATIVES	6-1
6.1	INTRODUCTION	6-1
6.2	OVERVIEW OF THE MODIFIED PROJECT	6-1
6.2.1	Project Objectives	6-1
6.2.2	Key Impacts of the Modified Project	6-2
6.3	ALTERNATIVES ELIMINATED FROM CONSIDERATION	6-2
6.3.1	Mixed-Use Tribal Destination Resort and Casino (Alternative A from 2011 FEIR)	6-2
6.3.2	Mixed-Use Tribal Destination Resort and Casino with Residential Component & "Preserve Building 6" Mixed-Use Tribal Destination Resort and Casino with Residential Component (Alternatives B & B1 from 2011 FEIR)	6-3
6.3.3	Reduced Intensity Mixed-Use Tribal Destination Resort and Casino (Alternative C from 2011 FEIR)	6-3
6.3.4	Total Parkland (Alternative E from 2011 FEIR)	6-4
6.3.5	No Build/Community Open Spaces & Park	6-4
6.4	ALTERNATIVES EVALUATED IN THIS DRAFT SEIR	6-4
6.4.1	Alternative A – No Action Alternative	6-4
6.4.2	Alternative B – Reduced Intensity Mixed-Use Development (Alternative D of 2011 FEIR)	6-10
6.4.3	Alternative C – Base Reuse Plan Alternative	6-16
6.4.4	Alternative D – Community Plan Alternative	6-22
6.4.5	Alternative E – Affordable Housing Reduced Density Alternative	6-28
6.5	ENVIRONMENTALLY SUPERIOR ALTERNATIVE	6-36
7	REPORT PREPARATION	7-1
7.1	LEAD AGENCY – CITY OF RICHMOND	7-1
7.2	SEIR CONSULTANTS – ANALYTICAL ENVIRONMENTAL SERVICES	7-1
7.3	PROJECT CONSULTANTS	7-1
8	REFERENCES	8-1
9	ACRONYMS	9-1

LIST OF TABLES

Table 1-1	Comparison of the Modified Project and Alternatives B1 and D in the 2011 FEIR	1-3
Table 2-1	Summary of Impacts and Mitigation Measures	2-6
Table 3-1	Modified Project	3-22
Table 3-2	Solid Waste Generation	3-39
Table 3-3	Total Quantity and Type of Soil Requiring Excavation	3-42
Table 3-4	Permits and Approvals Required	3-48
Table 4.0-1	Development Scenarios	4.0-6
Table 4.2-1	Ambient Air Quality Standards	4.2-3
Table 4.2-2	Air Quality and Greenhouse Gas CEQA Thresholds of Significance	4.2-7
Table 4.2-3	Bay Area Air Quality Management District Attainment Status	4.2-22
Table 4.2-4	Unmitigated Residential-Heavy Construction Emissions	4.2-41
Table 4.2-5	Unmitigated Commercial-Heavy Construction Emissions	4.2-41
Table 4.2-6	Mitigated (Unmitigated) Residential-Heavy Operational Emissions	4.2-43
Table 4.2-7	Mitigated (Unmitigated) Commercial-Heavy Operational Emissions	4.2-44
Table 4.2-8	Construction HRA Results	4.2-46
Table 4.2-9	Construction GHG Emissions	4.2-51
Table 4.2-10	Mitigated (Unmitigated) Operational GHG Emissions	4.2-52
Table 4.3-1	Summary of Habitat Types within the Project Site	4.3-14
Table 4.3-2	Regionally Occurring Special-Status Species	4.3-21
Table 4.3-3	Summary of Project Impacts by Habitat Type	4.3-71
Table 4.4-1	Summary of Contributing Buildings of Winehaven Historic District	4.4-13
Table 4.4-2	Summary of Studies Including Off-Site Improvement Locations	4.4-18
Table 4.4-3	Sites Within or Immediately Adjacent to the Project Site, Including Off-Site Improvement Locations	4.4-20
Table 4.5-1	PG&E-Owned Electricity Generating Sources	4.5-9
Table 4.5-2	PG&E Renewable Energy Deliveries	4.5-9
Table 4.5-3	Construction Fuel and Energy Usage	4.5-13
Table 4.5-4	Estimated Peak Energy Demands of the Modified Project	4.5-14
Table 4.7-1	Off-Site Environmental Database Listings Not Related to the Naval Fuel Depot	4.7-23
Table 4.9-2	Mitigation Required for General Plan Consistency	4.9-26
Table 4.10-1	Community Noise Exposure (Ldn or CNEL, dB)	4.10-2
Table 4.10-2	City of Richmond Community Noise Ordinance Exterior Noise Limits	4.10-5
Table 4.10-3	Noise Standards, DBA – Noise Levels for a Time Period Not Exceeding	4.10-6
Table 4.10-4	Noise Exposure – Land Use Requirements and Limitations	4.10-7
Table 4.10-5	Acoustical Terminology	4.10-8
Table 4.10-6	Typical A-Weighted Sound Levels of Common Noise Sources	4.10-9
Table 4.10-7	Criteria for Adding Two Noise Measurements	4.10-10
Table 4.10-8	Long-Term Noise Level Measurement Results	4.10-12
Table 4.10-9	Short-Term Noise Level Measurement Results	4.10-12
Table 4.10-10	Existing Traffic Noise Modeling Results	4.10-14
Table 4.10-11	Ambient Vibration Monitoring Results – July 30, 2019	4.10-15
Table 4.10-12	Significance of Changes in Cumulative Noise Exposure	4.10-19
Table 4.10-13	Vibration Damage Potential Threshold Criteria	4.10-20
Table 4.10-14	Vibration Annoyance Potential Criteria	4.10-20
Table 4.10-15	Typical Construction Equipment Noise – Project Site	4.10-23
Table 4.10-16	Typical Construction Equipment Noise – Off-Site	4.10-24
Table 4.10-17	Vibration Source Levels for Construction Equipment	4.10-28
Table 4.11-1	Regional Population	4.11-2
Table 4.11-2	Regional Unemployment	4.11-2
Table 4.11-3	Regional Housing Stock	4.11-3
Table 4.11-4	2017 Regional Vacant Rental Prices	4.11-3
Table 4.11-5	Population Estimates Based on City of Richmond Housing Element	4.11-9
Table 4.11-6	Residential Units and Population	4.11-11
Table 4.11-7	Population Generated	4.11-12

Table 4.12-1	Fire Department Service Calls 2017	4.12-12
Table 4.12-2	Average Police Response Time.....	4.12-14
Table 4.12-3	School Enrollment and Capacity	4.12-15
Table 4.12-4	Estimated School-Aged Children Generation	4.12-25
Table 4.13-1	Signalized Intersection Level of Service Definitions	4.13-19
Table 4.13-2	Unsignalized Intersection Level of Service Definitions	4.13-20
Table 4.13-3	Existing (2019) Intersection Level of Service Conditions.....	4.13-21
Table 4.13-4	Cumulative Intersection Level of Service Conditions.....	4.13-24
Table 4.13-5	Project Trip Generation Calculations	4.13-27
Table 4.13-6	2020 Daily Vehicle Miles Traveled.....	4.13-28
Table 4.13-7	2040 Daily Vehicle Miles Traveled.....	4.13-29
Table 4.13-8	Existing Plus Project Intersection Level of Service Conditions.....	4.13-32
Table 4.13-9	Existing Interstate 580 Freeway Delay Index Calculation.....	4.13-36
Table 4.13-10	Cumulative Plus Project Intersection Level of Service Conditions	4.13-41
Table 4.13-11	Cumulative Interstate 580 Freeway Delay Index Calculation	4.13-44
Table 5-1	City of Richmond Development Projects Located Near the Modified Project Site	5-11
Table 5-2	Geographic Scope of Cumulative Impacts	5-17
Table 6-1	Comparison – Modified Project and Alternatives Characteristics.....	6-5
Table 6-2	Environmental Impact Comparison Between the Modified Project and Alternatives	6-38

LIST OF FIGURES

3-1	Regional Location	3-2
3-2	Site and Vicinity	3-3
3-3	Historic Buildings and Rails Contributing to the Winehaven Historic District	3-4
3-4	City of Richmond General Plan Land Use Map for Project Site	3-6
3-5	City of Richmond Zoning Map for Project Site	3-7
3-6	Existing Onsite Water Infrastructure.....	3-9
3-7	Slopes on Project Site	3-11
3-8	Disposal Areas with FOSET and 2003 CRUP Property Boundaries	3-13
3-9	Installation Restoration (IR) Sites and Hillside Underground Storage Tanks (USTs).....	3-16
3-10	Planning and Development Areas.....	3-18
3-11	Example Buildout Under Option 2	3-19
3-12	Land Use – Proposed General Plan Designations.....	3-24
3-13	Stenmark Drive Widening.....	3-26
3-14	Stenmark Drive Right-of-Way.....	3-27
3-15	Internal Circulation.....	3-29
3-16	Pier Reconfiguration Alternatives	3-31
3-17	Proposed Water Infrastructure	3-35
3-18	Onsite Wastewater Treatment Plant	3-36
3-19	Wastewater Treatment Variant A – Onsite Wastewater Treatment Facility	3-37
3-20	Wastewater Treatment Variant B – Connection to City Sewer System	3-38
3-21	Off-Site PG&E Gas and Electric.....	3-41
4.0-1	Off-Site Improvements.....	4.0-5
4.1-1	Aerial Photograph.....	4.1-11
4.1-2	Views from the Project Site	4.1-12
4.1-3	Views of the Project Site.....	4.1-13
4.1-4a	Key to Viewpoint Photos.....	4.1-14
4.1-4b	Viewpoint Photos.....	4.1-15
4.1-5a	Views from the Ferry	4.1-16
4.1-5b	Views from the Ferry	4.1-17
4.1-6a	Key to Viewpoint Locations	4.1-22
4.1-6b	Architectural Rendering – View 1	4.1-23
4.1-6c	Architectural Rendering – View 2	4.1-24
4.1-6d	Architectural Rendering – View 3	4.1-25

4.1-7	Views from Stenmark Drive	4.1-28
4.2-1	Shoreline Areas Vulnerable to Sea Level Rise	4.2-28
4.3-1	Habitat Map	4.3-12
4.3-2	Sensitive Biological Resources	4.3-20
4.4-1	Winehaven NRHP District Cultural Resources.....	4.4-14
4.4-2	Winehaven during construction (1908) – View North	4.4-15
4.4-3	View of Winehaven circa 1918 – View North	4.4-16
4.6-1	Soil Types.....	4.6-9
4.6-2	Regional Fault Locations	4.6-11
4.6-3	Liquefaction Susceptibility	4.6-14
4.7-1	Environmental Baseline Survey Parcels	4.7-11
4.7-2	Very High Fire Hazard Severity Zone Map.....	4.7-16
4.8-1	San Francisco Bay Central Hydrologic Planning Area	4.8-14
4.8-2	Drainage Watershed Map.....	4.8-16
4.8-3	FEMA Flood Zone Map – Off-Site Well Location	4.8-18
4.9-1	Bay Area Conservation and Development Commission Map 4 - Central Bay North	4.9-3
4.9-2	City of Richmond Change Area 13 San Pablo Peninsula	4.9-7
4.9-3	Base Reuse Plan Development Areas	4.9-17
4.10-1	Noise and Vibration Measurement Locations.....	4.10-13
4.13-1	Transportation Study Area and Intersections	4.13-11
4.13-2	Transportation Analysis Zone.....	4.13-29
4.14-1	Existing Recycled Water Distribution System, RARE Water Project	4.14-12
6-1	Alternative A – No Action Alternative – Site Plan	6-6
6-2a	Alternative B – Reduced Intensity Mixed-Use Development Alternative – Site Plan	6-11
6-2b	Alternative B – Reduced Intensity Mixed-Use Development Alternative – Site Plan	6-12
6-3	Point Molate Reuse Plan	6-18
6-4	Alternative D – Community Plan Alternative – Site Plan	6-23
6-5a	Alternative E – Affordable Housing Reduced Density Alternative – Site Plan	6-29
6-5b	Alternative E – Affordable Housing Reduced Density Alternative – Site Plan	6-30

APPENDICES

Appendix A	Notice of Preparation
Appendix B	Scoping Comments
Appendix C	Preliminary Drainage Study
Appendix D	Transportation Impact Analysis
Appendix E	Preliminary Water and Wastewater Master Plan
Appendix F	Water Supply Assessment
Appendix G	Phase I Environmental Site Assessment
Appendix H	Dry Utilities Technical Memorandum and Will Serve Letters
Appendix I	Preliminary Grading Analysis
Appendix J	Rehabilitation Analysis
Appendix K	Explanation of Mitigation and Improvement Measures from Section 5.0
Appendix L	General Plan Consistency Table
Appendix M	Air Quality Tables
Appendix N	Climate Action Plan Consistency Table
Appendix O	Bay Plan Consistency Table
Appendix P	Biology Technical Studies
Appendix Q	Historical Resource Documents
Appendix R	Geotechnical/Geologic Feasibility Memorandum
Appendix S	City of Richmond Fire Hazard Reduction Vegetation Management Standards
Appendix T	Environmental Noise and Vibration Assessment
Appendix U	Richmond Municipal Sewer District Wastewater Infrastructure Analysis

SECTION 1.0

INTRODUCTION

1.0 INTRODUCTION

1.1 OVERVIEW

This Draft Subsequent Environmental Impact Report (SEIR) is an informational document intended to disclose to the public and decision-makers the environmental effects of the Point Molate Mixed-Use Development Project (Modified Project) proposed by Winehaven Legacy LLC (the Applicant). The Modified Project makes certain changes in land use and intensities to the project and alternatives analyzed in the Final Environmental Impact Report for the Point Molate Mixed-Use Tribal Destination Resort and Casino Project (2011 FEIR) that was certified by the City of Richmond (City) in 2011. As discussed further in **Section 1.2.2**, this Draft SEIR addresses the potential physical and environmental effects of the Modified Project per the requirements of the California Environmental Quality Act (CEQA), Public Resources Code (PRC) § 21000, et seq., and the CEQA Guidelines, Title 14 of the California Code of Regulations (CCR) § 15000, et seq. As an informational document for use in the planning and decision-making process, this Draft SEIR does not recommend either approval or denial of the Modified Project.

This Draft SEIR provides the CEQA compliance documentation upon which the consideration of, and action on, all applicable land use permits and other approvals (collectively, “approvals”) by the City for the Modified Project or an alternative may be based. These include a General Plan amendment, rezoning to a Planned Area District, Planned Area Plan, tentative subdivision map, and Certificate of Appropriateness for construction in the Winehaven Historic District (Historic District), as well as any additional discretionary approvals that may be necessary to implement the Modified Project (or a project alternative if appropriate), including those described in **Table 3-4**.

1.2 ENVIRONMENTAL REVIEW CONTEXT

1.2.1 PREVIOUS PLANNING AND ENVIRONMENTAL REVIEW

1.2.1.1 1997 Point Molate Reuse Plan

Beginning in 1942, Point Molate served as a U.S. Navy (Navy) fuel storage and transfer facility called Naval Fuel Depot Point Molate (NFD). The NFD closed on September 30, 1995 under the U.S. Department of Defense Base Realignment and Closure Act of 1990 (BRAC). Pursuant to federal military base reuse procedures, a 45-member Blue Ribbon Advisory Committee developed the 1997 Point Molate Reuse Plan (Reuse Plan) that was approved by the Richmond City Council, acting as the Local Reuse Authority, in 1997 (City of Richmond, 1997; Appendix D of the 2011 FEIR). The Reuse Plan serves as a guide for the reuse and development of the NFD area (Project Site); goals include preservation of open space, economic development, and rehabilitation of the Historic District.

1.2.1.2 2002 Navy Environmental Impact Statement/Environmental Impact Report

The Modified Project is located within the Project Site, which is approximately 412 acres in size. In 2002, prior to transferring the majority of the NFD, the Navy and the City prepared a joint Environmental Impact Statement (EIS)/Environmental Impact Report (EIR) that analyzed the potentially significant environmental impacts of disposal and reuse of the Project Site (City of Richmond, 2002; Appendix U of

the 2011 FEIR). The 2002 EIS/EIR was based on the Reuse Plan and presented residential use as one of three alternatives. In 2003, 85 percent of the Project Site was transferred to the City pursuant to the BRAC process. The remainder of the Project Site was transferred to the City on March 25, 2010, pursuant to the Early Transfer Cooperative Agreement for the environmental remediation of the NFD, as detailed in **Section 4.7.3**.

1.2.1.3 2011 Final Environmental Impact Report for Casino Project

Summary of Previous Analysis

A Draft Environmental Impact Statement/Environmental Impact Report (2009 DEIS/EIR) for the proposed Point Molate Mixed-Use Tribal Destination Resort and Casino Project (Casino Project) was released in July 2009. The 2009 DEIS/EIR fully analyzed five development alternatives for the Project Site, including one alternative that contained substantial commercial and residential components without a casino (Alternative D). Because the City prepared the 2009 DEIS/EIR jointly with the Bureau of Indian Affairs (BIA) to satisfy the National Environmental Policy Act (NEPA), it addressed all alternatives to the same level of detail as the proposed Casino Project, as required under NEPA (40 Code of Federal Regulations § 1502.14).

After the 2009 DEIS/EIR was completed and circulated for public review and comment, the City and the BIA decided to bifurcate the environmental review process and complete a Final EIS and Final EIR separately due to their differing internal procedures and timelines. For that reason, the City completed the 2011 FEIR under CEQA and independent of the NEPA process. Under CEQA, the level of analysis for alternatives need not be exhaustive (*Sierra Club v. City of Orange* [2008] 163 Cal.App.4th 523, 547). The 2011 FEIR analyzed the impacts of the Casino Project (Alternative A) as the Preferred Alternative and included an analysis of the following development alternatives:

- **Alternative B:** Mixed-Use Tribal Destination Resort and Casino with Residential Component
- **Alternative B1:** "Preserve Building 6" Mixed-Use Tribal Destination Resort and Casino with Residential Component
- **Alternative C:** Reduced Intensity Mixed-Use Tribal Destination Resort and Casino
- **Alternative D:** Non-Trust Acquisition with Non-Gaming Mixed-Use Development
- **Alternative E:** Total Parkland
- **Alternative F:** No Action

In March 2011, the City Council certified the 2011 FEIR; however, after certification, the City Council discontinued consideration of the Casino Project. The Regional Water Quality Control Board (RWQCB) subsequently relied on the CEQA analysis in the 2011 FEIR to approve a Final Feasibility Study/Remedial Action Plan for remediation of the Project Site in June 2014.

Relationship of Modified Project to the 2011 FEIR Alternatives and Analysis

The 2011 FEIR studied the environmental impacts of the Casino Project (Alternative A) as well as several other alternatives, including the "Preserve Building 6" Mixed Use Tribal Destination Resort and Casino with Residential Component (Alternative B1) and the Non-Trust Acquisition with Non-Gaming Mixed-Use Development Alternative (Alternative D). Alternatives B1 and D of the 2011 FEIR reflect the conceptual

development pattern of the Reuse Plan that was also incorporated into the City's General Plan 2030 (General Plan).

The Modified Project proposes similar land uses as Alternative D of the 2011 FEIR, which entailed a mixed-use development of residential, commercial, and open space/recreation uses. However, rather than demolish a large portion of the historic buildings, the Modified Project proposes to rehabilitate and/or provide adaptive reuse for all of the building contributors to the Historic District, similar to Alternative B1 of the 2011 FEIR. A comparison of the Modified Project characteristics and the characteristics of Alternatives B1 and D of the 2011 FEIR is presented in **Table 1-1**.

TABLE 1-1
COMPARISON OF THE MODIFIED PROJECT AND ALTERNATIVES B1 AND D IN THE 2011 FEIR

Use	Alternative B1	Alternative D	Modified Project Option 1	Modified Project Option 2
Residential	340	1,100 dwelling units	1,260 dwelling units	1,260 dwelling units
Open Space	180 acres	180 acres	193.1 acres	193.1 acres
Water Transportation Terminal	5,000 square feet	5,000 square feet	5,000 square feet	5,000 square feet
Commercial or Mixed-Use	<ul style="list-style-type: none"> ▪ 960,528 square feet ▪ Hotel, casino, tribal facilities, entertainment 	<ul style="list-style-type: none"> ▪ 250,000 square feet ▪ Hotel and conference center 	<ul style="list-style-type: none"> ▪ 250,000 square feet <ul style="list-style-type: none"> ▪ 20,000 square feet retail/restaurant 473 residential units 	<ul style="list-style-type: none"> ▪ 250,000 square feet <ul style="list-style-type: none"> ○ 20,000 square feet retail/restaurant ○ 230,000 square feet other commercial
Uses in Rehabilitated Winehaven Buildings	<ul style="list-style-type: none"> ▪ 374,572 square feet ▪ All commercial ▪ No demolition of contributing structures of the Historic District 	<ul style="list-style-type: none"> ▪ 163,000 square feet ▪ All commercial ▪ Demolish Building 6 	<ul style="list-style-type: none"> ▪ 374,572 square feet <ul style="list-style-type: none"> ○ 20,000 square feet retail/restaurant ○ 307 residential units ▪ No demolition of contributing buildings of the Historic District 	<ul style="list-style-type: none"> ▪ 374,572 square feet <ul style="list-style-type: none"> ○ 20,000 square feet retail/restaurant ○ 354,572 square feet other commercial ▪ No demolition of contributing buildings of the Historic District

Notes: All square footage and acreages are approximate.

The 2011 FEIR retains value for examining the impacts of the Modified Project, which is expected to have fewer, but generally similar environmental effects which can be mitigated in similar ways as those identified for the Casino Project in the 2011 FEIR. But the City has determined that sufficient time has passed and changes have occurred to require updated analysis. This SEIR will compare the Modified Project's environmental impacts to the impact conclusions in the 2011 FEIR.¹

¹ For the purposes of the SEIR the impacts of the Modified Project are generally compared to those of the Casino Project, which was the Proposed Project (and generally the most impactful alternative) analyzed in the 2011 FEIR.

1.2.2 STANDARD FOR DETERMINING IF FURTHER ENVIRONMENTAL REVIEW IS REQUIRED

The 2011 FEIR was certified by the City as complying with CEQA and provides useful analysis that will be incorporated into this SEIR. The 2011 FEIR was also relied on by the RWQCB to approve a permit to conduct limited remediation. The 2011 FEIR provides an in-depth analysis of the impacts of developing the Project Site. Generally, after certification of an EIR, the standard for determining whether further CEQA review is required is established by PRC § 21166 and CEQA Guidelines § 15162. PRC § 21166 applies to the Modified Project because an in-depth CEQA review has already been performed for a project on the Point Molate Site. Repeating a substantial portion of the EIR process, such as preparation and public review of a SEIR, is warranted if and to the extent that the project meets any of the following stated conditions.

1. **Substantial** changes to the project or **substantial changes** to circumstances, or new information of substantial importance; that
2. Require **major revisions** to the EIR; and
3. Result in **new significant** environmental effects or a **substantial increase** in the severity of previously identified significant effects. (PRC § 21166; CEQA Guidelines § 15162 and 15163.)

The findings for each of these standards must be based on substantial evidence (CEQA Guidelines § 15162). Further, the findings in PRC § 21166 provide the basis for focusing the scope of the issues to be addressed in an SEIR or supplemental EIR. The City determined that it is appropriate to prepare a full SEIR to identify the potential effects of the Modified Project because the Modified Project includes substantial changes to the project analyzed the 2011 FEIR, such as altering and increasing the density of some uses.

Pursuant to PRC § 21166 and CEQA Guidelines § 15162, this Draft SEIR also considers whether substantial changes to circumstances or new information of substantial importance exist that could result in the Modified Project having a new significant impact not previously identified in the 2011 FEIR. The 2011 FEIR defined baseline conditions specifically by topic but generally identified the baseline as the existing conditions at the time the 2011 EIR was prepared. As noted in **Section 1.4.3.2**, commenters on the Notice of Preparation of the SEIR for the Modified Project (NOP) requested that the SEIR modify the baseline from the 2011 FEIR baseline to when the NOP was published in July 2019. In response to scoping comments, and because of the substantial amount of time that has passed since the preparation of the 2011 FEIR, the environmental setting has been updated for this SEIR. **Section 4.0.3.2** provides a definition of the baseline as used in this SEIR.

Although permitted under CEQA, this SEIR does not use the operations in effect at the time of base closure as the baseline. (Public Resources Code § 21083.8.1(b)(1); CEQA Guidelines §§ 15125(b), 15229(c).) Using such operations as the baseline would have resulted in the Modified Project's impacts appearing lower than using the current conditions as the baseline. Accordingly, to be conservative, the City chose to use an "existing conditions" baseline for this SEIR.

This Draft SEIR assesses whether the Modified Project would have significant impacts, including new impacts not previously identified and analyzed in the 2011 FEIR, based on a comparison of the Modified

Project to baseline conditions as defined above and in **Section 4.0.3.2**. The Draft SEIR is being prepared in accordance with the requirements of the most recently-revised CEQA Guidelines. Further, in accordance with CEQA Guidelines § 15126.2, this Draft SEIR considers an expanded range of alternatives to the Modified Project (in addition to those analyzed in 2011 FEIR) to help identify additional ways to avoid or substantially lessen significant effects of the Modified Project.

The additional analysis provided in this Draft SEIR, with updates to setting, impacts, mitigation measures, and alternatives, is intended to provide a thorough evaluation of the potential environmental effects of the Modified Project.

1.3 CEQA PROCESS AND PUBLIC REVIEW OPPORTUNITIES

1.3.1 LEAD AGENCY

In accordance with CEQA Guidelines §§ 15050 and 15367, the City is the “Lead Agency,” which is defined as the “public agency which has the principal responsibility for carrying out or disapproving a project.” The Lead Agency is also responsible for determining whether an EIR or a negative declaration is required, the scope of the environmental analysis, preparing an EIR, and responding to comments received on a draft EIR. Prior to making a decision to approve or deny a project, the City, as the Lead Agency, will be required to certify that the SEIR has been completed in compliance with CEQA, that the decision-making body reviewed and considered the information in the SEIR, and that the SEIR reflects the independent judgment of the City.

1.3.1.1 Known Responsible and Trustee Agencies

As the Lead Agency and as appropriate under CEQA, the City also intends for this Draft SEIR to serve as the CEQA-required environmental documentation for consideration of the Modified Project by other Responsible Agencies and Trustee Agencies that may have discretionary authority over approvals required to implement the Modified Project. Under CEQA Guidelines §§ 15381 and 15386, the term “Responsible Agency” includes all public agencies, other than the Lead Agency, that have discretionary approval power over aspects of a project; and the term “Trustee Agency” means a state agency having jurisdiction by law over natural resources affected by a project which are held in trust by the people of California. A list of Responsible Agencies and Trustee Agency approvals for the Modified Project is provided in **Table 3-4**.

1.3.2 NOTICE OF PREPARATION AND SCOPING

On July 12, 2019, the City published a NOP to prepare an SEIR for the Modified Project. The NOP provided sufficient information describing the Modified Project and the potential environmental effects to enable the responsible agencies and public to make a meaningful response. The NOP included a description of the Modified Project, the Modified Project location, and the probable environmental effects of the Modified Project. The City sent the NOP to governmental agencies and to organizations, nearby property owners, and persons interested in the current Modified Project. The NOP invited public comment on the scope of the Modified Project during a 30-day public review and comment period and specifically requested that agencies with regulatory authority over any aspect of the Modified Project describe that

authority and identify the relevant environmental issues that should be addressed in this Draft SEIR. The NOP is provided as **Appendix A** to this Draft SEIR.

The City held a scoping meeting for the SEIR on July 29, 2019, at the City Council Chambers. Agencies and members of the public were invited to attend and provide input on the scope of the SEIR. Comments from agencies and the public provided at the scoping meeting and in written comments submitted in response to the NOP are included within **Appendix B**. Issues raised during the scoping process are summarized in **Section 1.4.3**. The analysis presented in this Draft SEIR addresses all scoping comments received that pertain to the potential environmental effects of the Modified Project under CEQA.

1.3.3 DRAFT SEIR AND PUBLIC REVIEW

This Draft SEIR will be circulated for public review and comment for a period of 45 days. During this period, the general public, organizations, and agencies can submit comments to the Lead Agency on the accuracy and completeness of the Draft SEIR. Release of the Draft SEIR marks the beginning of a 45-day public review period pursuant to CEQA Guidelines § 15105. The public can review the Draft SEIR at the City website (<http://www.ci.richmond.ca.us/2302/Point-Molate-Development>), or at the following addresses during normal business hours.

Richmond City Hall
Planning Division
450 Civic Center Plaza
Richmond, CA 94804

Richmond Library:
Main Branch
325 Civic Center Plaza
Richmond, CA 94804

West Side Branch (Point Richmond)
135 Washington Avenue
Richmond, CA 94801

All comments regarding the Draft SEIR should be addressed to:

City of Richmond
Attn.: Lina Velasco, Community Development Director
450 Civic Center Plaza
P.O. Box 4046
Richmond, CA 94804
admin@pointmolateseir.com

1.3.4 FINAL SEIR AND SEIR CERTIFICATION

Following the public review period, a Final SEIR will be prepared. The Final SEIR will respond to written comments received during the public review period and to oral comments made at the comment and hearing.

1.3.4.1 Certification of the SEIR and Project Consideration

The City will review and consider the Final SEIR. If the City finds that the Final SEIR is adequate and complete, the City will certify the Final SEIR. Upon review and consideration of the Final SEIR, the City Council may take action to approve, conditionally approve, revise, or reject the Modified Project. A decision to approve the Modified Project would be accompanied by written findings in accordance with CEQA Guidelines §§ 15091, 15093, and 15162, as applicable. A mitigation monitoring and reporting program, as described below, also would be adopted for features and mitigation measures that must be incorporated into the Modified Project or implemented to reduce or avoid significant effects on the environment and would be adopted as conditions of approval. Additionally, the City will be required to adopt a Statement of Overriding Considerations for any impacts determined to be significant and unavoidable. As described in **Section 1.2.2**, the standard for determining whether further CEQA review is required is established by PRC § 21166 and CEQA Guidelines § 15162. Therefore, if refinements occur to the Modified Project during the design process, the refinements will be reevaluated if they require an additional discretionary approval, and additional CEQA review will be implemented if determined necessary.

1.3.4.2 Mitigation Monitoring and Reporting Program

Throughout this Draft SEIR, mitigation measures have been clearly identified and presented in language that will facilitate establishment of a mitigation monitoring and reporting program. CEQA Guidelines § 21081.6(a) requires lead agencies to adopt a mitigation monitoring and reporting program to describe measures that have been adopted or made a condition of project approval in order to mitigate or avoid significant effects on the environment. The mitigation monitoring and reporting program, designed to ensure that these measures are carried out during project implementation, will be presented to the City Council for adoption at the time of consideration for project approval.

1.4 SCOPE OF THE SEIR

1.4.1 PROJECT MODIFICATIONS SINCE PUBLICATION OF THE NOP

Since publication of the NOP and public scoping period, the Applicant has received input from both the Richmond community and the City's Design Review Board regarding the design of the Modified Project. In response to comments received, minor changes have been made to the Modified Project since the circulation of the NOP in July of 2019. The acreage of submerged and un-submerged land was confirmed against the legal description of the parcels that comprise the Project Site, which resulted in minimal increases to open space and development acreages. Rather than analyzing the flexible use concept presented in the NOP, the Modified Project now proposes two development options – a residential-heavy option (Option 1) and a commercial-heavy option (Option 2). Within the development acreages, the maximum number of proposed residential units has decreased and the square footage of proposed retail/restaurants/commercial has increased. Accordingly, the distribution and densities of the Planning Areas have been adjusted. The Modified Project now includes an on-site joint emergency response station which was not described in the NOP. Finally, Wastewater Treatment Variant A, as described in the NOP, was expanded to include a recycled water pipeline to the nearby Chevron®-Richmond Refinery to participate in East Bay Municipal Utilities District's (EBMUD) existing recycled water program.

1.4.2 RESOURCE AREAS ADDRESSED IN THIS SEIR

The 2011 FEIR, in conjunction with comments received during scoping (**Appendix B**), were used to focus the SEIR on effects determined to be potentially significant. The following environmental resources were determined to have the potential to be significantly affected by the Modified Project and have therefore been addressed in detail in this Draft SEIR.

- Aesthetics
- Air Quality and Greenhouse Gas Emissions
- Biological Resources
- Cultural Resources and Tribal Cultural Resources
- Energy
- Geology, Soils, and Mineral Resources
- Hazards, Hazardous Materials, and Wildfire
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Population and Housing
- Public Services and Recreation
- Transportation
- Utilities and Service Systems

The environmental resources discussed in this Draft SEIR differ from those discussed in the 2011 FEIR due to updates to the CEQA Guidelines since certification of the 2011 FEIR. Additionally, as discussed in **Section 1.2.1**, because the 2011 FEIR was originally prepared as a joint EIS/EIR and later submitted only as an EIR, the analysis included in the 2011 FEIR met the requirements of both CEQA and NEPA. This Draft SEIR focuses solely on those elements necessary to satisfy CEQA.

Pursuant to CEQA, the discussion of potential effects on the physical environment is focused on those impacts that may be significant or potentially significant. CEQA allows a Lead Agency to limit the detail of discussion of the environmental effects that are not considered potentially significant (PRC § 21100; CEQA Guidelines §§ 15126.2(a) and 15128. The Project Site has no agricultural or forest resources and therefore those topics are not discussed in the SEIR.

1.4.3 ISSUES AND CONCERNS RAISED DURING SCOPING

As required by CEQA Guidelines, the scope of this Draft SEIR includes all environmental issues to be resolved and all areas of controversy relevant to the physical environment known to the Lead Agency (the City), including those issues and concerns identified by the City and by other agencies, organizations, and individuals in response to the NOP published by the City on July 12, 2019. Appropriate mitigation has been identified, where necessary, to reduce any potentially significant effects.

The issues analyzed in this Draft SEIR are listed in **Section 1.4.2**. The NOP is included as **Appendix A** to this Draft SEIR; the comments received in response to the NOP are included in **Appendix B** and are summarized below.

1.4.3.1 California Environmental Quality Act Process

Multiple commenters expressed concern that the NOP for the Modified Project was out of compliance with CEQA Guidelines and current case law. These concerns are addressed in **Section 1.2.2**.

Multiple parties expressed concern with the preparation of an SEIR rather than a new EIR, for the following reasons.

- Commenters were concerned with the legality of preparing an SEIR following the certified 2011 FEIR for a project that was never approved.
- Commenters noted changes in environmental conditions since the publication of the 2011 FEIR.
- Commenters noted the availability of new information since the publication of the 2011 FEIR.
- Commenters believe that the project analyzed in the 2011 FEIR differs in design from the Modified Project to the extent that the 2011 FEIR is irrelevant to the Modified Project, and thus an SEIR is not sufficient in analyzing the Modified Project.

These concerns are addressed in **Section 1.2**, Environmental Review Context and the remainder of this SEIR, which provides a full, updated analysis of the Modified Project.

1.4.3.2 Baseline

Multiple parties requested a modified baseline in favor of analyzing potential impacts starting when the NOP was published as opposed to the 2011 FEIR baseline. These comments are addressed in **Section 1.2.2**, and discussed further in the Regulatory Setting and Environmental Setting discussions of each issue area presented in **Section 4**. Due to the time elapsed since the date of 2011 FEIR publication, this Draft SEIR includes an updated baseline/environmental setting for each issue area.

1.4.3.3 Aesthetics

Commenters requested a discussion of the potential impacts of on-Site lighting on the local views of the night sky in the City. Impacts associated with lighting and aesthetics are addressed in **Section 4.1**, Aesthetics, of the Draft SEIR.

1.4.3.4 Air Quality and Greenhouse Gas Emissions

Commenters requested a discussion of the potential impacts from the Modified Project on climate change, including carbon sequestration, air quality, and sea level rise; additionally, commenters offered suggestions for mitigation approaches including developing infill housing and limiting development to Priority Development Areas identified by the Metropolitan Transportation Commission and the Association of Bay Area Governments' Plan Bay Area. The California Department of Transportation (Caltrans) requested that the analysis include a Transportation Demand Management Program for vehicle miles traveled (VMT) reduction and greenhouse gas emissions. Residents asked that the proximity to nearby sensitive receptors including residential uses be considered in the air quality analysis. One commenter stated that in order to advance the Climate Action Plan of the City, new and denser housing should be located near public transportation options. These comments are addressed in **Section 4.2**, Air Quality and Greenhouse Gas Emissions.

1.4.3.5 Biological Resources

Private residents requested a discussion of the potential impacts to wildlife from possible noise and light generation. Additionally, commenters noted the need to account for impacts to any seasonal wet water courses. Commenters also requested a discussion of the potential impacts to critical habitats including, but not limited to, eelgrass beds, coastal grasslands, and riparian and wetland areas. These comments are addressed in **Section 4.3**, Biological Resources.

1.4.3.6 Cultural Resources and Tribal Cultural Resources

The Project Site has a relationship with indigenous tribes and groups of people, therefore commenters requested Assembly Bill (AB) 52 consultation and Senate Bill (SB) 18 consultation. A discussion of consultation in accordance with AB 52 and SB 18 and the potential impacts of the Modified Project on cultural resources and tribal cultural resources is included in **Section 4.4**, Cultural Resources and Tribal Cultural Resources.

1.4.3.7 Geology, Soils, and Mineral Resources

Commenters expressed concern that the Project Site is within a frequent earthquake zone. These comments are addressed in **Section 4.6**, Geology, Soils, and Mineral Resources.

1.4.3.8 Hazards, Hazardous Materials, and Wildfire

Commenters requested a discussion of hazards to human health and safety resulting from on-site hazardous materials as well as the proximity of the Project Site to the neighboring Chevron®-Richmond Refinery. Commenters expressed concern that the location of the Project Site is within a Very High Fire Severity Zone as designated by the City. Commenters requested that health and safety risks be communicated to potential residents of the Modified Project. These comments are addressed in **Section 4.7**, Hazards, Hazardous Materials, and Wildfire, and other related sections including **Section 4.12** and **Section 4.13**.

1.4.3.9 Hydrology and Water Quality

Commenters requested a discussion of the potential impacts to water quality, drainage, and runoff resulting from development of the Point Molate Site. These impacts are addressed in **Section 4.8**, Hydrology and Water Quality, and in **Appendix C**.

1.4.3.10 Land Use and Planning

Commenters requested a discussion of the compatibility of the Modified Project with the zoning of the Project Site and the guidelines set forth in planning documents including the General Plan and the Reuse Plan. Specifically, commenters were concerned that the acreage of open space presented in the NOP is inconsistent with the General Plan, and that portions of the Project Site are designated for Shoreline Park use in the Reuse Plan and the General Plan. Additionally, commenters were concerned that the Modified Project is not proposed to be located within a Priority Development Area, as defined by the Metropolitan

Transportation Commission and the Association of Bay Area Governments' Plan Bay Area. These comments are addressed in **Section 4.9**, Land Use and Planning.

1.4.3.11 Noise

A commenter expressed concerns regarding the impact to noise resulting from potential increases in traffic congestion from the Modified Project. These concerns are addressed in **Section 4.10**, Noise.

1.4.3.12 Population and Housing

Commenters discussed the need for infill housing. Commenters were also concerned about the affordability of the residences in the Modified Project. To the extent these matters raise possible environmental concerns (as opposed to solely economic or social concerns), they are addressed in **Section 4.11**, Population and Housing.

1.4.3.13 Public Services and Recreation

Since the publication of the NOP, a joint fire station and police substation has been added to the Modified Project. The joint facility is described in **Section 3.4.5** and is analyzed throughout **Section 4**. One commenter requested a discussion on the availability of healthcare facilities to residents in light of the closure of Doctors Medical Center since the publication of the 2011 FEIR. Since healthcare facilities are privately owned and are not considered a public service for CEQA purposes, CEQA does not require the examination of the availability of healthcare facilities as part of an environmental impact analysis. Commenters requested a discussion regarding the facilities that will be available for public use, including restrooms and kiosks at retail food and swimming pool/spa facilities. These concerns are addressed in **Section 4.12**, Public Services and Recreation.

1.4.3.14 Transportation

Multiple parties expressed concern regarding potential complications with access for emergency situations due to the Project Site having only one point of ingress and egress. Commenters requested project design adherence to specific transportation policies, plans, and projects. Commenters also suggested potential mitigation measures for potential transportation impacts. These comments were considered and addressed as appropriate in **Section 4.13**, Transportation.

Caltrans requested that the analysis include a traffic demand analysis, an analysis of multimodal planning, a Transportation Demand Management Program for VMT reduction, and analysis of transportation impact fees. Caltrans also requested a discussion of the City responsibilities as Lead Agency as they pertain to project fair-share contributions, financing, scheduling, implementation responsibilities, and Lead Agency monitoring for all proposed mitigation measures. These comments are addressed in **Section 4.13**, Transportation, and supporting technical analysis is included in the Traffic Impact Analysis in **Appendix D**.

1.4.3.15 Utilities and Service Systems

The Contra Costa Local Agency Formation Commission requested a discussion regarding the source of sewer service to the Project Site, including necessary annexations, infrastructure improvements, and the provider's capacity and ability to serve the Modified Project. This information is included in **Sections 3.4.6** and **4.14** and **Appendix E**.

The EBMUD submitted several comments in regards to water service, water recycling, and water conservation.

- EBMUD stated that a Water Supply Assessment (WSA) is required for any project within their service area. The WSA is included as **Appendix F**.
- EBMUD also stated that water service for new multi-unit structures should be individually metered or sub-metered in compliance with SB 7; compliance with SB 7 is discussed in **Section 4.14**, Utilities and Service Systems.
- EBMUD stated the placement of water mains and piping must be in compliance with CCR Title 22 and any required groundwater quality remediation plans. Adherence to the above design standards are incorporated into **Section 4.14** and discussed in detail in **Appendix E**.
- EBMUD stated requirements that the Modified Project must incorporate with regard to water conservation and recycling measures in compliance with Section 31 of the EBMUD Water Service Regulations and EBMUD Policy 9.05. EBMUD also suggested compliance with AB 325. Adherence to the regulations are discussed in **Section 4.14**, Utilities and Service Systems.

Several commenters expressed concern with the operational feasibility of wastewater treatment options. The feasibility of the proposed wastewater options is discussed in **Section 4.14**, Utilities and Service Systems.

Contra Cosa Environmental Health Services provided a list of required permits and standards pertaining to the on-site wastewater disposal system, solid waste sites, public sewer, and public water supply that are incorporated into **Section 4.14**, Utilities and Service Systems, as relevant. Off-Site sewer improvements are described in **Section 3.0**, Project Description, and analyzed throughout this Draft SEIR. A list of potential permits and approvals for the Modified Project is included in **Table 3-4**.

1.4.3.16 Alternatives

Commenters requested a full analysis of a no project alternative. The following were suggested as potential alternative uses for the Project Site: a community plan prepared by the Point Molate Alliance, the Richmond Community Development Enterprise Plan, an expanded pier use alternative, a recreational use alternative including the development of a soccer field, and an affordable housing alternative. A reasonable range of alternatives are described and analyzed in **Section 6**, Analysis of Alternatives.

1.4.3.17 Other Issues Raised During Scoping

Commenters requested a discussion of the potential indirect socioeconomic effects of the Modified Project on the local economy, including potential impacts to taxes, property values, economic productivity for specific sectors, income stratification, insurance options, allocation of City resources, and public

service rates. Under CEQA, economic or social effects are not considered significant effects on the environment. Rather, these effects are considered in the context of their potential linkage or indirect connections between the Modified Project and physical environmental effects, and are discussed as necessary within each issue area of **Section 4.0**.

1.4.4 INCORPORATION BY REFERENCE AND REFERENCE DOCUMENTS

Section 15150 of the CEQA Guidelines allows for incorporation by reference of “all or portions of another document which is a matter of public record or is generally available to the public.” Incorporation by reference is used principally as a means of reducing the size of EIRs. This Draft SEIR relies, in part, on information previously prepared by the City and other agencies for areas within the project vicinity or infrastructure improvements necessary to serve the Project Site.

The documents listed below are referenced as source documents for this Draft SEIR. This is not a comprehensive list of the documents referenced in this Draft SEIR (see **Section 8**, References); rather, this is a list of other CEQA documents that were heavily relied on for analysis. These documents were used primarily to describe the environmental setting, provide general background material, or communicate descriptive technical material. These documents are available for public review and inspection during normal business hours at the Richmond City Hall, the Richmond Main Library, and at the City’s website, as stated in **Section 1.3.3**. Additionally, these documents are searchable by their State Clearinghouse Number (SCH#) on public information databases including ceqanet.opr.ca.gov.

- 2011 FEIR (SCH# 2005032073)
 - The incorporated part of the 2011 FEIR is briefly summarized in the appropriate sections of this SEIR to provide a comparison between environmental analysis for the Casino Project and the Modified Project. The relationship between the incorporated part of the referenced document and the SEIR is also described, with any new information or changed circumstances since the 2011 FEIR noted throughout **Section 4**.
- City of Richmond General Plan Update EIR (SCH# 2008022018)
 - In 2011, the City prepared an EIR for an update to their General Plan in order to establish a framework for population and job growth and provision of public services and facilities through Year 2030. The project was approved, and the most recent General Plan guides land use development throughout the City. The General Plan includes land use designations and 16 change areas as the focus of change in the City, among other goals and policies. The EIR for this document is incorporated by reference throughout this Draft SEIR to aid in the analysis of the Modified Project’s consistency with the City’s General Plan and cumulative analysis.
- San Francisco Bay Trail at Point Molate Initial Study/Mitigated Negative Declaration (IS/MND) (SCH# 2018032036)
 - In 2018, the City prepared and adopted an IS/MND for the construction and operation of a 2.5-mile bike and pedestrian path through Point Molate and approved the Bay Trail Extension project. This 2.5-mile segment would be a portion of a regional effort to build a 500-mile walking and cycling path around the entire San Francisco Bay. Of the 2.5-mile portion approved in the IS/MND, 1.5 miles run through the Project Site. Therefore, the IS/MND is incorporated by reference throughout **Section 4** of this SEIR and the Modified

Project, which is implementing the 1.5-mile segment of the Bay Trail that runs through the Project site, would be required to comply with the mitigation measures from the Bay Trail IS/MND during its construction.

1.5 REPORT ORGANIZATION

This Draft SEIR is split into nine sections; each is described briefly here.

- **Section 1.0, Introduction:** Provides an introduction and overview of the Draft SEIR, describes the review and certification process, lists documents incorporated by reference, describes issues raised in scoping, and describes the scope of the analysis in the Draft SEIR.
- **Section 2.0, Executive Summary:** Summarizes the Modified Project and the conclusions of this Draft SEIR document, including a summary of the alternatives. A summary table is included and organized to allow the reader to easily reference the analysis of potentially significant effects, proposed mitigation measures, and any residual environmental impacts after implementation of mitigation measures.
- **Section 3.0, Project Description:** Provides a detailed description of the Modified Project, including its location, background information, major objectives, and technical characteristics.
- **Section 4.0, Environmental Analysis:** Describes the baseline environmental setting and provides an assessment of impacts, including cumulative impacts, for each issue area presented in **Section 1.4.2**.
- **Section 5.0, CEQA Considerations:** Provides discussions required by CEQA regarding other impacts that would result from the Modified Project, including indirect and growth-inducing impacts, secondary effects from mitigation measures, significant and unavoidable impacts, and significant irreversible changes to the environment.
- **Section 6.0, Analysis of Alternatives:** Describes and compares alternatives and their environmental impacts to the Modified Project and its environmental impacts.
- **Section 7.0, Report Preparation:** Lists report authors and agencies consulted for technical assistance in the preparation and review of this Draft SEIR.
- **Section 8.0, References:** Provides bibliographic information for all references and resources cited.
- **Section 9.0, Acronyms:** Provides a list of definitions for all acronyms used in this Draft SEIR.
- **Appendices:** Includes various documents and data directly related to the analysis presented in this Draft SEIR.

SECTION 2.0

EXECUTIVE SUMMARY

2.0 EXECUTIVE SUMMARY

2.1 INTRODUCTION

This Draft Subsequent Environmental Impact Report (SEIR) is an informational document intended to disclose to the public and decision-makers the environmental effects of the Point Molate Mixed-Use Development Project (Modified Project). The Modified Project makes certain changes in land use and intensities to the project and alternatives analyzed in the Final Environmental Impact Report for the Point Molate Mixed-Use Tribal Destination Resort and Casino Project (2011 FEIR) that was certified by the City of Richmond (City) in 2011. As provided by California Environmental Quality Act (CEQA) Guidelines (CEQA Guidelines) § 15123, this section provides a brief summary of the Modified Project and its consequences, alternatives to the Modified Project analyzed within the SEIR, the areas of controversy known to the Lead Agency (City), and the remaining issues to be resolved.

2.2 PROJECT LOCATION

The Point Molate Site (Project Site) is owned by the City and is located on the San Pablo Peninsula within the City limits in Contra Costa County. The Project Site is bounded by the San Francisco Bay (Bay) to the west, open space parcels to the north and south, and the Chevron®-Richmond Refinery to the east, with the 480-foot hillsides of Potrero Ridge separating the refinery from the Project Site. Approximately 136 acres of the approximately 412-acre Project Site are submerged in the Bay, leaving approximately 276 acres above water. The Project Site is approximately 1.5 miles north of Interstate 580 and the Richmond-San Rafael Bridge, and has direct freeway access via Stenmark Drive, a City-owned roadway. The Assessor's Parcel Number of the Project Site is 561-100-008.

2.3 PROJECT OBJECTIVES

The project objectives for purposes of CEQA requirements are to:

- provide a project that is consistent with the BRAC approval and related conditions, as well as with the Navy Record of Decision for the transfer;
- provide a project that supports the vision of the 1997 Point Molate Base Reuse Plan;
- provide a variety of residential unit types to create a new residential neighborhood that serves a diverse population and helps to address the state and City's housing crisis;
- provide a mix of residential, retail, and restaurant uses that support each other and decrease trips compared to single-use developments;
- have a positive contribution to the local economy through new capital investment, the creation of new jobs, and the expansion of the tax base;
- balance economic development with retention and preservation of open space and the rehabilitation of historic buildings;
- provide open space that preserves sensitive habitat, minimize ridgeline disturbance, and provide opportunities for passive recreation;
- implement the portion of the San Francisco Bay Trail project along the frontage of the Project Site to increase shoreline recreational opportunities in the City;

- provide a mix of uses at a density sufficient to fund hazardous material remediation, substantial amounts of open space, and historic rehabilitation and adaptive reuse of the historic buildings in the Historic District;
- facilitate the early environmental cleanup and redevelopment and reuse of now vacant and underutilized land in an urban area;
- provide high-quality architecture that complements existing, historic structures and incorporates sustainable design practices into new buildings and landscaping; and
- provide high-quality, efficient infrastructure to serve the Modified Project.

2.4 PROJECT UNDER REVIEW

The Modified Project identifies eight Planning Areas within the Project Site, designated as Planning Areas A through H. Potential developable areas within the Planning Areas (referred to herein as Development Areas) would be limited to no more than 30 percent of the total above-water Project Site area (approximately 82.74 acres) by the Modified Project's entitlements. Planning Areas A through E are outside of the Historic District; Planning Areas F, G, and H are within the Historic District. Development within the Historic District would include rehabilitation and reuse of the existing historic buildings. The Modified Project proposes to rehabilitate all of the contributor buildings to the Historic District per the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings. Any structures located onsite that are not considered contributing elements of the Historic District would be demolished.

The Planning Areas within the Project Site would be assigned land use designations that exist in the current City General Plan 2030 (General Plan), consisting of Medium Intensity Mixed-Use (MI-MU) and Low-Density Residential, and rezoned pursuant to a Planned Area Development Plan. The Modified Project would amend the MI-MU designation to (1) increase the maximum permitted floor area ratio from 2 to 2.5 in the Winehaven District, (2) to permit greater heights and residential or commercial uses only with approval of a Planned Area District (PAD), and (3) permit low-rise development with approval of a PAD. The Modified Project also proposes to modify the text describing Change Area 13 to make it consistent with the Modified Project.. The Modified Project's zoning would further refine the development regulations proposed by its proposed General Plan land use designations. The hillside open space will be assigned a General Plan land use designation of Open Space (OS) and the shoreline open space would be designated as Parks and Recreation (PR).

The Modified Project proposes a mixed-use community that includes two options: Option 1 (Residential-Heavy Option) and Option 2 (Commercial-Heavy Option). Both of these options would include the following components:

- Approximately 1,260 newly constructed residential units, comprised of the following unit types:
 - 274 Single Family Homes
 - 636 Low-Rise Apartments and Townhomes
 - 350 Mid-Rise Apartments and Condominiums

- Approximately 374,572 square feet (sq. ft.) of rehabilitated existing, historic structures¹ and 250,000 sq. ft. of new construction Approximately 10,000 sq. ft. would be allotted for an on-site joint fire and police substation and/or other community service uses.
- The remainder of the Project Site would remain as open space (approximately 193.06 acres), including recreational areas, parks, trails (including an approximately 1.5-mile portion of the San Francisco Bay Trail along the shoreline), vista overlooks, and other similar spaces that are open to the public.
- A terminal on the existing pier that may be accessible to water transit options, such as ferries, water shuttles, and/or water taxis.

Under Option 1, the approximately 374,572 square feet of rehabilitated historic buildings would contain 20,000 square feet of retail/restaurant uses and 473 residential units. The approximately 250,000 square feet of new construction would contain 20,000 square feet of restaurant/retail uses and 307 residential units.

Under Option 2, the approximately 374,572 square feet of rehabilitated historic buildings would contain 20,000 square feet of retail/restaurant uses and 354,572 square feet of other commercial uses. The approximately 250,000 square feet of new construction would contain 20,000 square feet of restaurant/retail uses and 230,000 square feet of other commercial uses.

The Modified Project would be developed in accordance with a Disposition and Development Agreement that will, subject to completion of CEQA compliance, authorize the sale of the developable portions of the Project Site to Winehaven Legacy LLC (the Applicant) and include other terms regarding the sale, transfer, and development of the site. The remaining areas of the Project Site would either continue to be owned and maintained by the City or the City could enter into an agreement for all or part of the open space to be owned and/or maintained by another party (i.e., East Bay Regional Parks District or a public land trust).

2.5 MODIFIED PROJECT'S IMPACTS

As provided by the CEQA Guidelines § 15123(b)(1), an Environmental Impact Report (EIR) must provide a summary of the impacts, mitigation measures, and significant impacts after mitigation for a proposed project. This information is presented in **Section 4**, Environmental Analysis, of this Draft SEIR, and summarized in **Table 2-1**. Impacts from the Modified Project on Aesthetics; Biological Resources; Cultural Resources and Tribal Cultural Resources; Energy, Geology, Soils, and Mineral Resources; Hazards, Hazardous Materials, and Wildfire; Hydrology and Water Quality; Land Use and Planning; Noise; Population and Housing; Public Services and Recreation; and Utilities and Service Systems would be mitigated, when appropriate, to less-than-significant levels. However, the Modified Project would result in significant and unavoidable impacts to Air Quality and Greenhouse Gas Emissions and Transportation.

Table 2-1 presents a summary of the Modified Project's impacts and proposed mitigation measures that would avoid or minimize potential impacts. In the table, the level of significance of each environmental impact is indicated both before and after the application of the identified mitigation measure(s). In

¹ Square footage of the existing historic buildings is approximate and derived from prior documentation and plans. Surveys will be conducted to verify existing square footage.

addition, a summary statement of how the impact compares with the findings of the 2011 FEIR is also provided. For detailed discussions of all Modified Project impacts and mitigation measures, refer to the environmental analysis discussions in **Section 4.0**.

Acronyms used within **Table 2-1** to describe levels of significance are explained below.

- BI – Beneficial impact
- LTS – Less than significant
- NI – No impact
- PS – Potentially significant
- S – Significant
- SU – Significant and unavoidable

2.6 ALTERNATIVES TO THE MODIFIED PROJECT

Section 6.0 presents a detailed analysis of a range of reasonable alternatives to the Modified Project. The alternatives that are analyzed in detail are listed below:

Modified Project Alternatives:

- Alternative A – No Action Alternative
- Alternative B – Reduced Intensity Mixed-Use Development (Alternative D of the 2011 FEIR)
- Alternative C – Base Reuse Plan Alternative
- Alternative D – Community Plan Alternative
- Alternative E – Affordable Housing Reduced Density Alternative

Environmentally Superior Alternative: Alternative C (Base Reuse Plan Alternative) is identified as the CEQA-required environmentally superior alternative to the Modified Project, after considering and rejecting Alternative A (No Action Alternative), as CEQA requires.

2.7 AREAS OF CONTROVERSY AND SCOPING COMMENTS

As required by the state CEQA Guidelines, the scope of this EIR includes all environmental issues to be resolved and all areas of controversy known to the City as the Lead Agency, including those issues and concerns identified as possibly significant by the City in its preliminary environmental review of the Modified Project, and by other agencies, organizations, and individuals in response to the City's Notice of Preparation (NOP; dated July 12, 2019). Areas of potential controversy raised by agencies or the public include:

- CEQA Process
- Baseline
- Aesthetics
- Air Quality and Greenhouse Gas Emissions
- Biological Resources

- Cultural Resources and Tribal Cultural Resources
- Geology, Soils, and Mineral Resources
- Hazards, Hazardous Materials, and Wildfire
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Population and Housing
- Public Services and Recreation
- Transportation
- Utilities and Service Systems
- Alternatives
- Other Issues Raised During Scoping

See **Section 1.4.3** of this SEIR for a comprehensive summary of public comments on the NOP, and **Appendix B** for the original correspondence received in response to the NOP.

2.8 ISSUES TO BE RESOLVED

Section 15123(b)(3) of the CEQA Guidelines requires that an EIR present the issues to be resolved, including the identification of an environmentally superior alternative and a discussion of whether or how to mitigate a project's significant effects. The major issues to be resolved for the Modified Project include decisions by the City, as the Lead Agency, as to whether:

- Mitigation measures identified in this SEIR should be adopted or modified;
- Additional mitigation measures need to be applied to the Modified Project;
- Feasible alternatives exist that would achieve the objectives of the Modified Project and reduce significant environmental impacts; and
- The Modified Project should or should not be approved.

TABLE 2-1. SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation	Comparison to 2011 FEIR Findings
4.1 Aesthetics				
4.1.1: Implementation of the Modified Project would have a substantial adverse effect on a scenic vista.	S	4.1-2: The booster pump station shall be housed in a structure that is consistent in design with the design guidelines for the Modified Project. The structure shall be designed to appear similar to other nearby structures, including non-residential or residential structures, whichever is located nearest to the booster pump station.	LTS	No New or Substantially More Significant Impact
4.1.2: Implementation of the Modified Project would conflict with applicable zoning and other regulations governing scenic quality	S	Implement Mitigation Measure 4.1-2 4.1-1: All wastewater infrastructure shall be screened using vegetation, such as trees and shrubs, and fencing. Vegetation must be selected so that screening is achieved at least 12 inches above infrastructure at full growth and fully cover fencing. Facilities and fencing shall be painted on all sides to blend into vegetation. Example colors include EBMUD's standard green color, Federal Color Number FS-14159.	LTS	No New or Substantially More Significant Impact
4.1.3: Implementation of the Modified Project will create a new source of light or glare.	LTS	No mitigation is required.	LTS	No New or Substantially More Significant Impact
4.1.4: Implementation of the Modified Project may create significant cumulative aesthetic impacts.	LTS	No mitigation is required.	LTS	No New or Substantially More Significant Impact
4.2 Air Quality and Global Climate Change				
4.2.1: Implementation of the Modified Project may significantly conflict with or obstruct implementation of applicable air quality plan.	PS	4.2-1: Prior to issuance of occupancy permits, the Modified Project would reduce emissions of CAPs and GHGs during operation through the following actions: 4.2-1 (a) All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day. 4.2-1 (b) All haul trucks transporting soil, sand, or other loose material offsite shall be covered. 4.2-1 (c) All visible mud or dirt track-out onto adjacent	SU	New Significant Impact

- public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- 4.2-1 (d)** All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.
- 4.2-1 (e)** All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- 4.2-1 (f)** Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, § 2485 of California Code of Regulations). Clear signage shall be provided for construction workers at all access points.
- 4.2-1 (g)** All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- 4.2-1 (h)** A publicly visible sign shall be posted with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The applicable air district's phone number shall also be visible to ensure compliance with applicable regulations.

Additionally, the following measures would be implemented by the Modified Project to reduce emissions of CAPs, GHG, and DPM from construction.

- 4.2-1 (i)** The Modified Project shall use Tier 4 Final off-road equipment for construction equipment 50 horsepower or greater, except for paving equipment.
- 4.2-1 (j)** The Modified Project shall use electric construction equipment for equipment that is less than 50 horsepower

4.2-2: Prior to issuance of occupancy permits, the

Modified Project would reduce emissions of CAPs and GHGs during operation through the following actions:

- 4.2-2 (a)** Indoor painting shall utilize "super-compliant" VOC architectural coating for residential and non-residential interior areas. The VOC emission factors meet the more stringent limits in South Coast Air Quality Management District Rule 1113.
- 4.2-2 (b)** Exterior painting shall utilize "super-compliant" VOC architectural coating for residential and non-residential exterior areas. The VOC emission factors meet the more stringent limits in South Coast Air Quality Management District Rule 1113.
- 4.2-2 (c)** The Modified Project shall require energy-star rated appliances.
- 4.2-2 (d)** The Modified Project shall install electric water heaters and heaters in all residential and commercial development.
- 4.2-2 (e)** The Modified Project shall implement the Transportation Demand Management program described in Section 4.13. bathroom faucets, low-flow kitchen faucets, low-flow toilets, and low-flow showers.
- 4.2-2 (f)** The Modified Project will comply with the City's Zero Waste Ordinance resulting in a 50 percent diversion of solid waste from landfills.
- 4.2-2 (g)** The Modified Project shall install low-flow bathroom faucets, low-flow kitchen faucets, low flow toilets, and low-flow showers, consistent with CALGreen requirements.
- 4.2-2 (h)** The Modified Project shall commit to exclusive use of small-sized (149-passenger, 2,900 horsepower) ferries or water taxis equipped with Tier 4 engines.

The following mitigation measures are incorporated by reference from the San Francisco Bay Trail at Point Molate IS/MND:

AQ-1: Consistent with the Basic Construction Mitigation Measures identified by the BAAQMD, the following actions shall be incorporated into construction contracts and specifications for the Modified Project.

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day with reclaimed water, if available.
- All haul trucks transporting soil, sand, or other loose material offsite shall be covered.
- All visible mud or dirt tracked-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day with reclaimed water, if available.
- All haul trucks transporting soil, sand, or other loose material offsite shall be covered.
- All visible mud or dirt tracked-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.

4.2.2: Implementation of the Modified Project is not likely to generate construction related emissions resulting in a cumulatively considerable net increase of any criteria air pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.	LTS	Implement Mitigation Measure 4.2-1 and AQ-1 .	LTS	No New or Substantially More Significant Impact
4.2.3: Implementation of the Modified Project may potentially generate operational related emissions in a cumulatively considerable net increase of any criteria air pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standards.	S	Implement Mitigation Measure 4.2-2 .	SU	New Significant Impact
4.2.4: Implementation of the Modified Project will not significantly expose sensitive receptors to substantial pollutant concentrations from construction.	PS	4.2-6: The Modified Project would implement the SGWMP, described in Section 4.7, to reduce the potential for accidental release VOCs in the soil at the Project Site that may be disturbed by construction activities.	LTS	No New or Substantially More Significant Impact
4.2.5: Implementation of the Modified Project may significantly expose sensitive receptors to substantial pollutant concentrations from operation.	PS	4.2-7: The Modified Project shall comply with BAAQMD regulations 2-1 and 2-5 with implementation of new emergency generators and installation and operation of the WWTP. New sources of emissions must implement T-	LTS	No New or Substantially More Significant

		BACT if individual source risks exceed 1.0 in a million for cancer and/or the chronic HI is greater than 0.20. Additionally, a permit would be denied if Modified Project cancer risk exceeds 10.0 in a million or if chronic or if the acute HI exceeds 1.0.		Impact
4.2.6: Implementation of the Modified Project may create significant impacts and result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.	PS	4.2-8: The following mitigation measures are proposed to reduce odor impacts from operation of the wastewater treatment plant for the Modified Project. The following odor mitigation measures to wastewater treatment plants are recommend by Bay Area Air Quality Management District: <ol style="list-style-type: none"> 1. Activated Carbon Filter/Carbon adsorption 2. Biofiltration/Bio Trickling Filters 3. Fine Bubble Aerator 4. Hooded Enclosures 5. Wet and Dry Scrubbers 6. Caustic and Hypochlorite Chemical Scrubbers 7. Ammonia Scrubber 8. Energy Efficient Blower System 9. Thermal Oxidizer 10. Capping/Covering Storage Basins and Anaerobic Ponds 11. Mixed Flow Exhaust 12. Wastewater Circulation Technology 13. Exhaust Stack and Vent Location with Respect to Receptors 	LTS	No New or Substantially More Significant Impact
4.2.7: Implementation of the Modified Project is not likely to generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.	PS	Implement Mitigation Measure 4.2-1 and 4.2-2 . 4.2-5: Prior to issuance of occupancy permits, the Modified Project will reduce emissions of GHGs through implementation of a GHG Reduction Plan, which may include the following. <ol style="list-style-type: none"> 1. Purchase GHG emissions reduction credits from sources within the SFBAAB. 2. Increase on-site solar energy production beyond that required by the 2019 Title 24 Building Code. 3. Require commercial tenants to opt into a 100 percent carbon free electricity provider option, such as the Deep Green option provided by MCE. 4. Require use of electrically powered landscape equipment in the Modified Project. 5. Install electric vehicle chargers at multi-family residential buildings. 6. Install additional electric vehicle chargers in 	SU	No New or Substantially More Significant Impact

		<p>single-family residences.</p> <ol style="list-style-type: none"> 7. Install additional electric vehicle chargers in commercial parking lots. 8. Provide additional residential and commercial bike parking (beyond City code requirements). 9. Provide bike sharing facilities for commercial and residential users. 10. Plant additional trees throughout the Project Site. 11. Install LED streetlights. 12. Reduce the Modified Project's use of natural gas. 13. Purchase carbon offsets from a CARB-approved registry. 		
<p>4.2.8: Implementation of the Modified Project may conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.</p>	PS	<p>Implement Mitigation Measures 4.2-2, 4.2-3, and 4.2-5.</p> <p>4.4-2: Prior to the issuance of commercial building permits, the Applicant or its designee shall submit building design plans to the City that demonstrate that the parking areas for commercial buildings in the Plan Area would be equipped with EV charging stations that provide charging opportunities to at least the number of parking spaces required by CalGreen Tier 1 standards. "Commercial buildings" include retail, restaurant, light industrial, office, and mixed-use buildings.</p> <p>The EV charging stations shall achieve a similar or better functionality as a Level 2 charging station. In the event that the installed charging stations use functionality/technology other than Level 2 charging stations, the parameters of the mitigation obligation (i.e., the number of parking spaces served by EV charging stations) shall reflect the comparative equivalency of Level 2 charging stations to the installed charging stations on the basis of average charge rate per hour. For purposes of this equivalency demonstration, Level 2 charging stations shall be assumed to provide charging capabilities of 25 range miles per hour.</p>	LTS	No New or Substantially More Significant Impact
4.3 Biology				
<p>4.3.1: Implementation of the Modified Project could have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS.</p>	PS	<p>4.3-1: The Suisun marsh aster shall be avoided to the maximum extent practicable. After pre-construction surveys required by Mitigation Measure 4.3-2, setbacks of 50 feet, or the maximum buffer possible where a full 50 feet is not possible, shall be established around the total area where the population occurs via high visibility fencing prior to grading or construction. A qualified plant biologist</p>	LTS	No New or Substantially More Significant Impact

shall be present during any and all grading or other construction activities that occur within 50 feet of the Suisun marsh aster setback. The qualified biologist shall act as a construction monitor to ensure the fencing remains intact and that construction activities do not penetrate this setback.

If complete avoidance of the Suisun marsh aster population cannot be reasonably achieved, and impacts to this species are unavoidable, consultation shall be initiated with the CDFW to ensure that avoidance and minimization measures are employed, and to require compensatory mitigation for any remaining impacts. Upon CDFW approval, the impacted individual plants shall be transplanted out of their existing locations and into an equivalent and suitable habitat that occurs within an established on-site open space preserve and monitored for survival for a total of five years. A qualified plant biologist shall determine the exact transplanting locations and shall supervise or perform all of the transplanting activities. Transplanting activities shall occur during the fall months as possible, prior to the onset of heavy rains and inundation of seasonal wetland features to minimize transplant stress to the plants and ensure transplant success. Transplanting activities shall not occur in the spring, summer, or winter months, unless prior approval is obtained from CDFW. If CDFW requires additional on-site plantings to fully offset any impacts, then Winehaven Legacy LLC (Applicant) shall comply with that requirement.

4.3-2: A botanical survey of the development footprint shall be conducted prior to construction to confirm that establishment of those special-status plants with the potential to occur onsite has not occurred within the development footprint. Surveys shall occur within the appropriate identification period for those special-status plants with the potential to occur within the development footprint to be surveyed. Should a special-status plant be identified on or within 50 feet of ground disturbance, a 25-foot high-visibility no disturbance buffer shall be established by the qualified biologist, except if a larger buffer is required by a different project mitigation measure, such as Mitigation Measure 4.3-1 for the Suisun Marsh Aster, or determined necessary by the qualified biologist. Results of this pre construction survey shall be

documented in a memo to the City.

Should a special-status plant not previously identified on the Project Site be observed within the development footprint, the CDFW and/or USFWS shall be consulted as appropriate in order to determine suitable mitigation actions. For CNPS rank 1 and rank 2 plants, consultation with the City shall occur to determine an appropriate course of action consistent with the City's goals and policies related to conservation of biological resources. This mitigation shall be completed via transplanting or compensatory planting at a minimum ratio of 2:1. Should take of a State or federally listed plant species be unavoidable, an incidental take permit from CDFW and/or USFWS, may be required pursuant to applicable laws and regulations.

4.3-3 An Environmental Awareness Training shall occur for all construction personnel working on the Project Site prior to any construction personnel being allowed to perform outdoor construction activities for the Project and its off-site improvements. A qualified biologist shall prepare instructional materials for the City's review and approval and shall train designated personnel to perform Environmental Awareness Training for construction staff. This training shall include the following.

- A discussion on the importance of disease control and invasive species management in protecting sensitive biological resources
- A discussion on those special-status wildlife with the potential to occur within the impact area
- A discussion on special-status plants observed on the Project Site
- Relevant biological information on those special-status species
- What to do in the event of an occurrence of a special-status species on the Project Site

Record of this training shall be maintained on the Project Site and shall be made available to agencies upon request.

4.3-4: The eelgrass bed habitat onsite shall be completely avoided during construction and operation of the Modified Project. Specifically, water vessels (e.g., ferries, barges,

water taxis/shuttles) servicing the retrofitted pier shall not come within 1,000 feet of the eelgrass bed habitat as identified in the pre-construction and annual surveys. The existing pier shall be utilized and the total surface area of the pier shall not be increased. Improvement of the existing pier shall be implemented as necessary, but no new piers and/or structures shall be built within or in the vicinity of any eelgrass bed habitat. Activities associated with the pier reuse shall be subject to the acquisition of necessary permits. These may include, but are not limited to, necessary BCDC permits.

The Applicant shall employ dust control measures to ensure excavated soil transferred from the Project Site to barges docked at the end of the pier using a conveyor belt system does not result in debris in the Bay. Such dust control measures shall include, but not be limited to, the following.

- The conveyor belt system shall be completely enclosed to prevent any loose aggregate, soils, or dust from entering the Bay during these transport operations.
- Sediment shall be watered as needed to prevent dust from becoming airborne.
- Vehicles transporting soils shall utilize designated routes. Should these routes include dirt roads, these roads shall be watered as needed to prevent excessive production of dust.
- Vehicles transporting soils across dirt roads shall not exceed a speed of 15 miles per hour.
- Soils shall be covered when transported from the location of excavation to the removal offsite.

All water vessel routes shall be limited to the deep-water shipping channel when not moored at the pier, and velocities shall be lowered as water vessels approach the pier to reduce waking. Water vessel speeds shall be limited to 10 knots or less within 750 feet of the pier. In addition, water vessel traffic shall not route from the terminal landward towards the shoreline. Mooring of private boats is not to be allowed on the pier. An appropriate signage and/or a buoy system shall be implemented to properly inform marine traffic of the sensitive eelgrass habitats and to help keep any vessels away from these habitats.

Prior to construction, the Applicant shall prepare an eelgrass monitoring plan consistent with the California Eelgrass Mitigation Policy and Implementing Guidelines, to be submitted to the NMFS for review and approval. The Plan shall require eelgrass surveys be conducted immediately prior to construction, annually throughout construction, and three years following the initial use of the pier to ensure ship travel routes do not impact eelgrass. Surveys shall be conducted pursuant to protocols outlined in the California Eelgrass Mitigation Policy and Implementing Guidelines, and shall document eelgrass distribution and density on both the Project Site and at a suitable control site during the eelgrass growing season. Results of surveys shall be provided to the NMFS Santa Rosa office staff within 60 days of completion. If NMFS determines the Modified Project actions have adversely impacted eelgrass in or adjacent to the Project Site based on pre- and post- work distribution and density surveys, an eelgrass mitigation plan shall be provided to NMFS for review and approval within 60 days of the determination of adverse impacts. The mitigation plan shall provide for no net loss of habitat function, and shall include criteria consistent with the California Eelgrass Mitigation Policy and Implementing Guidelines as well as one or more of the following.

- In-kind creation, restoration, or enhancement of habitat with a success ratio following three years of monitoring at or exceeding 1.2:1
- Purchase of mitigation credits from an established and NMFS-approved eelgrass mitigation bank at a ratio of 1:1 for banks established over three years
- Purchase of mitigation credits from a NMFS-approved eelgrass mitigation bank at a NMFS-approved ratio exceeding 1:1 for banks that have been established less than three years
- Out-of-kind mitigation only in the circumstance that in-kind mitigation is not feasible, and out-of-kind mitigation provides for sufficient ecological benefits approved by NMFS and other trustee agencies such as CDFW

4.3-5: Should work occur during the general nesting season (February 15 to September 15), a pre-construction

nesting bird survey shall be conducted by a qualified biologist no more than five days prior to the start of ground-disturbing activities as possible. The survey shall cover all areas within 500 feet of planned construction activities. Should an active nest be identified, a high visibility "disturbance-free" buffer shall be established by the qualified biologist based on the species identified. The buffer distance shall be based upon the potential for construction noise, visual disturbance, and other disruptive metrics with the potential to affect nesting, the species of bird with the nest, and shall be at least 500 feet, unless a smaller buffer is warranted based on the recommendation of the qualified biologist and available CDFW and/or USFWS guidelines for the protection of nests and breeding a particular species. Should the nest of a special-status bird be identified, the qualified biologist along with CDFW and/or USFWS shall be consulted based on the regulatory jurisdiction of the species and nest to determine suitable buffer size and any other screening measures to help minimize or avoid the impact. Alternatively, should the qualified biologist be approved by CDFW for the purpose of performing nesting bird surveys prior to these surveys, the qualified biologist may set the appropriate construction buffer for a special-status bird nest without additional consultation.

This buffer shall be maintained until it can be verified by a qualified biologist that the nestlings have fledged or the nest has failed. Should construction activities cease for five consecutive days or more, an additional nesting bird survey shall be required should construction resume during the general nesting season. Survey results shall be documented in a memorandum.

Should take of a special-status bird species be unavoidable, an incidental take permit from CDFW and/or USFWS, as appropriate, shall be required.

4.3-6: A nighttime lighting plan shall be developed by the project sponsor and approved by the City prior to groundbreaking that avoids and/or minimizes impacts to shorebirds and migratory birds as well as sensitive eelgrass habitat from nighttime lighting. The nighttime lighting plan shall consider Dark Sky Initiative measures in reducing the impacts of nighttime lighting. The lighting plan shall include, but not be limited to the following

provisions:

- Outdoor lighting known to attract shorebirds and migratory birds (e.g., searchlight advertising lighting, uplighting on signs, spotlights, floodlights, etc.) shall be prohibited.
- No up-lighting shall be allowed.
- Nighttime lighting or spillage of light onto beach strand and Bay waters shall be prohibited.
- All lighting fixtures associated with the development of the Modified Project shall be shielded, provide maximum efficiency, and reduce spill over through cut-off mechanisms (i.e., light that spills beyond the intended areas to be lit, but that is not projected directly upward).
- Lighting shall be deliberately directed downward and away from marshes and beaches, and optimize daylight by turning off when daylight provides sufficient illumination for vision and safety.
- Motion-sensitive lighting, lower intensity lights, and appropriately programmed timed lights shall be used to the maximum extent feasible.
- All outdoor lights other than those required for safety or security shall be off from the hours of 11 p.m. to 7 a.m. Lighting required for safety and security, such as pathway illumination and parking lot lighting, shall be designed to reduce light spillage and shall be of the minimum intensity to serve the purpose of illumination.
- Nighttime security lights shall be full cut off lights. Illumination shall be kept as low as possible while still providing the required security and safety illumination.
- All lighting shall comply with the RMC Article 15.04.604 as applicable.

4.3-7: Contract and Home Owners Association (HOA) provisions shall require contractors and occupants of the Project Site to implement measures to deter and/or minimize disturbance by common scavenging mammals (e.g., raccoons, opossums, feral cats, and skunks) which could potentially agitate, disrupt, or otherwise frighten bird species that may be present within the Project Site. Such measures shall include, but are not limited to, regular collection and removal of trash generated by the facility,

the use of sealed and secure trash dumpsters and bins throughout the facility, and fencing around trash collection areas. HOA provisions shall include the following:

- Open trash receptacles accessible to wildlife shall be prohibited.
- Curbside pickup for bulky waste and other events requiring placement of waste in areas of wildlife access shall occur as close to the scheduled pick-up event as possible.
- With the exception of bird feeders and similar items, placement of food outside shall be minimized. Pet food should be kept indoors as possible, especially during nighttime hours.

4.3-8: A qualified bat biologist shall conduct pre-construction bat surveys within seven days of ground disturbance of all potentially suitable bat habitats in the vicinity of any construction activities, including buildings scheduled to be modified or demolished and the pier that have the potential to support special-status bat roosts and trees with sloughing bark and basal hollows. If no bats and/or evidence of bats (e.g., guano) are detected during the pre-construction surveys, no additional surveys are required. Pre-construction surveys shall include, at a minimum, evening fly-out surveys accompanied by acoustic monitoring. If no evidence of bats occurs, then no further mitigation is necessary. Should construction halt for seven days or more, additional pre-construction surveys shall occur in areas with potential bat roost habitat.

If bats or evidence of bats are detected during the pre-construction surveys, a qualified bat biologist shall facilitate bat evacuation from structures, or removal of bat habitat trees. Bat habitat trees scheduled for removal shall be demarcated using high-visibility markers. Removal of potential bat roost habitat, such as trees with sloughing bark, shall occur over two days, with initial partial removal occurring the first evening and full removal occurring the following day. Evacuation may include the installation of exclusionary (e.g., mist) nets around occupied habitats while bats are away from their roosts. The netted habitats shall be monitored frequently at appropriate times and intervals to assure that all bats have left the roosts and that no bats re-enter during the duration of construction

activities impacting the bat habitat structure. The qualified bat biologist shall determine the specific protocol regarding bat removal within the larger historic buildings on-site. An exclusionary plan, should the qualified biologist determine that special-status bat exclusion from existing structures is necessary, shall be provided to the USFWS or CDFW as appropriate. Once construction activities are complete, the exclusionary nets shall be removed. Should construction halt for a period of more than seven days, an additional pre-construction survey shall occur for suitable bat roost habitat for which exclusion has not occurred.

Should take of a special-status bat species be unavoidable, an incidental take permit from the CDFW and/or USFWS, as appropriate, shall be required.

4.3-9: Signage at all public access locations in proximity to beach strand habitat and tidal marsh habitat shall be posted that describes the sensitive nature of these habitat types and their importance within the Bay ecosystem. Signage shall also be posted at the major trailheads within the open space informing visitors of the presence and importance of sensitive coastal scrub, coastal terrace prairie, and riparian habitat. Signage shall also include action items for visiting public to encourage protection of these valuable resources. Action items may include, but are not limited to:

- Proper collection and disposal of trash;
- Leashing of pets to prevent harassment of wildlife;
- Passive activities to enjoy wildlife without disturbing natural behavior;
- Proper maintenance of recreational equipment to prevent the spread of invasive species;
- Discouraging removal of plants or other biological resources; and
- Restrictions on allowable transportation (vehicles, bicycles, horses, etc.) on trails near sensitive habitat.

Park infrastructure installed on the Project Site such as benches and trail access shall be located at least 100 feet away from tidal marsh habitat on the Project Site, and signage restricting public access from tidal marsh habitat

shall be posted. Park infrastructure shall also include waste receptacles sufficient in number and size to service public use of the parks and open space with regular service to prevent over spilling. Removal of litter on beach strand or tidal marsh habitat shall occur as a component of servicing of waste receptacles.

4.3-10: Invasive plant species removal shall occur within parks or green space during the construction phase designed to incorporate the natural landscape. Invasive scrub and non-native annual grasses shall be removed and replaced with native coastal scrub and native coastal grassland species. Additionally, all vehicles and construction equipment shall be kept clean and free of debris that could track invasive species or pathogens onto the Project Site through routine exterior washing and removal of interior debris. A log of vehicle conditions shall be kept for all vehicles frequently entering and exiting the Project Site, and maintenance activities related to vehicle cleanliness shall occur following the evaluation that a vehicle is no longer in a clean condition.

4.8-1: The following BMPs shall be included in the SWPPP or SWPPPs prepared for the Modified Project construction in accordance with the Construction General Permit.

1. The construction contractor shall minimize the production of debris when cutting or demolishing portions of the over-water pier components or constructing new over-water components, and shall utilize netting, containment vessels, work platforms, or the equivalent to catch any falling debris.
2. The construction contractor shall install a containment boom around the work area to contain floating debris, and shall provide a vessel to retrieve debris from the containment area at the end of each work day.
3. Straw bales, wattles, fiber rolls, gravel bags, or equivalent devices shall be installed around the perimeter of the pier and stockpiled materials that are exposed to the environment to prevent debris from being transported to the Bay via runoff.
4. The use of hazardous materials during construction shall be minimized to the extent

- practical, and the amount of hazardous materials stored on the pier or adjacent to the waterfront shall be limited to what is needed to immediately support construction activities. The quantities shall not exceed 55 gallons for a specific material. All hazardous materials shall be stored safely and securely in approved containers, under cover or in an approved storage shed or cabinet, and with adequate secondary containment. Fueling of generators and other equipment shall be conducted away from the pier edge and other locations where a spill could easily enter the Bay, and adequate spill cleanup materials shall be provided during all fueling operations.
5. Well-maintained equipment shall be used to perform the construction work, and, except in the case of a failure or breakdown, equipment maintenance shall be performed offsite. Equipment shall be inspected daily by the operator for leaks or spills. If leaks or spills are encountered, the source of the leak shall be identified, leaked material cleaned up, and the cleaning materials shall be collected and properly disposed of.
 6. Inactive material stock piles must be covered and bermed at all times.
 7. During the wet season, construction materials, including topsoil, chemicals, and quarried materials transported by barge (regardless of the season) shall be stored, covered, and isolated to prevent runoff losses and contamination of surface and groundwater.
 8. Active debris boxes shall be covered during rain events to prevent contact with rainwater.
 9. Sanitary facilities shall be provided for construction workers.
 10. No concrete shall be stored onsite. After trucks are finished placing concrete, they shall be washed out in a designated area, and the wash water shall be contained within large plastic containers. Once dried, the residual concrete shall be appropriately disposed of offsite.
 11. At the end of each work day (at a minimum), the part of the pier deck upon which construction activities have taken place that day shall be cleaned of particulates, sediment, and debris, by
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- manual or mechanical means such as vacuuming or sweeping. Power washing is not an acceptable method for cleaning.
12. Non-stormwater discharges to the Bay shall be prohibited unless specified in the SWPPP and approved by the City and RWQCB.
 13. During construction, any barges performing work shall be moored in a position to capture and contain the debris generated during any substructure or in-water work. In the event that debris does reach the Bay, personnel in workboats within the work area shall immediately retrieve the debris for proper handling and disposal. All debris shall be disposed of at an authorized upland disposal site.
 14. Construction waste shall be collected and transported to an authorized upland disposal area, per federal, state, and local laws and regulations.
 15. All construction material, wastes, debris, sediment, rubbish, trash, fencing, etc., shall be removed from the Project Site once the Modified Project is completed and transported to an authorized disposal area, in compliance with applicable federal, state, and local laws and regulations.
 16. Encountered groundwater shall be removed from trenches and excavations in such a manner as to reduce potential contact with construction materials, construction personnel, and surface waters and shall be disposed of at an appropriately permitted facility such as a WWTP in accordance with the requirements of the NPDES permit.
 17. Existing vegetation shall be retained where possible. To the extent feasible, grading activities shall be limited to the immediate area required for construction and remediation.
 18. Temporary erosion control measures (such as silt fences, fiber rolls, vegetated swales, a velocity dissipation structure, staked straw bales, temporary revegetation, rock bag dams, erosion control blankets, and sediment traps) shall be employed for disturbed areas during the wet season.
 19. No disturbed surfaces shall be left without erosion

- control measures in place during the wet season.
20. Construction area entrances and exits shall be stabilized with crushed aggregate.
 21. Sediment shall be retained onsite by a system of sediment basins, traps, or other appropriate measures.
 22. A spill prevention and countermeasure plan shall be developed, which identifies proper storage, collection, and disposal measures for potential pollutants (such as fuel, fertilizers, pesticides, etc.) used onsite.
 23. Petroleum products shall be stored, handled, used, and disposed of properly in accordance with provisions of the CWA (33 USC § 1251 to 1387).
 24. Fuel and vehicle maintenance areas shall be established away from all drainage courses and designed to control runoff. When feasible fueling and vehicle maintenance shall be conducted offsite.
 25. Disposal facilities shall be provided for soil wastes, including excess asphalt during construction and demolition.
 26. The Applicant shall require all workers be trained in the proper handling, use, cleanup, and disposal of all chemical materials used during construction activities and provide appropriate facilities to store and isolate contaminants.
 27. The Applicant shall require all contractors involved in the Modified Project be trained on the potential environmental damages resulting from soil erosion prior to development by conducting a pre-construction conference. Copies of the project Erosion Control Plan (ECP) shall be distributed at this time. All construction bid packages, contracts, plans, and specifications shall contain language that requires adherence to the ECP.
 28. Construction activities shall be scheduled to minimize land disturbance during peak runoff periods. Soil conservation practices shall be implemented during the fall or late winter to reduce erosion during spring runoff.
 29. Creating construction zones and grading only the minimum required areas at a time shall minimize exposed areas. If possible during the wet season, grading on a particular zone shall be delayed until

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- protective cover is restored on the previously graded zone.
30. Utility installations and decommissioning shall be coordinated to limit the number of excavations.
 31. Preserving as much natural cover, topography, and drainage as possible, protect disturbed soils from rainfall during construction. Trees and shrubs shall not be removed unnecessarily.
 32. Disturbed areas shall be stabilized as promptly as possible, especially on long or steep slopes. Recommended plant materials and mulches shall be used to establish protective ground cover. Vegetation such as fast-growing annual and perennial grasses shall be used to shield and bind the soil. Mulches and artificial binders shall be used until vegetation is established. Where truck traffic is frequent, gravel approaches shall be used to reduce soil compaction and limit the tracking of sediment. The Modified Project shall use a preponderance of drought resistant species native to the Richmond area in the selection of vegetation, plants, mulches, or other plant material used in re-vegetation or soil stabilization.
 33. Surface water runoff shall be controlled by directing flowing water away from critical areas and by reducing runoff velocity. Diversion structures such as terraces, dikes, and ditches shall collect and direct runoff water around vulnerable areas to prepared drainage outlets. Surface roughening, berms, check dams, hay bales, use of permeable paving surfaces or similar measures shall be used to reduce runoff velocity and erosion.
 34. Sediment shall be contained when conditions are too extreme for treatment by surface protection. Temporary sediment traps, filter fabric fences, inlet protectors, vegetative filters and buffers, or settling basins shall be used to detain runoff water long enough for sediment particles to settle out.
 35. Topsoil removed during construction shall be carefully stored and treated as an important resource. Visqueen plastic and fiber rolls shall be deployed to cover and berm topsoil stockpiles to prevent runoff during storm events.

4.8-2: If the Pier renovation requires the removal or

disturbance of the petroleum conveyance pipeline, then the Applicant shall develop and submit to the City for approval a Demolition and Containment Plan that would minimize the potential for contamination of the Bay from the disturbance or removal of the petroleum conveyance pipeline during pier renovation. The Plan must be submitted and approved before any work on the pier begins. The Plan shall include provisions for control of potential releases of piping materials and other materials into the Bay. The Demolition and Containment Plan shall include capture and associated disposal provisions of any residual petroleum products or any other substances that may be released from the pipeline during construction activities. Conditions of the Demolition and Containment Plan shall include the implementation of floating booms, debris nets, and other measures as necessary to provide containment of possible contaminants. A trained construction site monitor shall provide daily oversight of the pier renovation operation. Furthermore, this Plan will delineate containment protocols of hazardous materials and allowable quantities including materials stored on pier for cleaning. If hazardous materials are stored, appropriate documentation of each shall be kept onsite as safety data sheets. The City shall ensure that the Demolition and Containment Plan includes procedures for notification of and reporting of contaminant releases to the RWQCB.

4.10-1: In order to satisfy applicable City noise level limits at existing sensitive receptors, the following construction-related noise mitigation measures shall be implemented.

- All mobile or fixed noise-producing equipment used that are regulated for noise output by a federal, state, or local agency shall comply with such regulations while in the course of project activity.
- Electrically powered equipment shall be used instead of pneumatic or internal combustion-powered equipment, where feasible.
- Material stockpiles and mobile equipment staging, parking, and maintenance areas shall be located as far as practicable from noise-sensitive receptors.
- Project work area speed limits shall not exceed 15 mph during the construction period.

- Nearby sensitive receptors shall be notified of construction schedules so that arrangements can be made, if desired, to limit their exposure to short-term increases in ambient noise levels.
- Any engine-powered construction equipment located adjacent to residential uses for more than five days shall be shielded from those uses by temporary noise-reducing barriers.
- Comply with City ordinance requirements, including:
 - Use of pile drivers, sources of impulsive sound and jack hammers shall be prohibited on Sundays and holidays, except for emergencies or as approved in advance by the Building Official. General construction noise shall be limited to weekdays from 7:00 a.m. to 6:00 p.m. Pile driving and similar loud activities shall be limited to weekdays from 8:00 a.m. to 5:00 p.m. General construction noise on projects repairing, renovating, or adding to residential structures with one to five dwelling units shall be limited to the hours of 7:00 a.m. to 8:00 p.m. Monday through Friday and 9:00 a.m. to 6:00 p.m. on Saturdays, Sundays, and federal holidays. Pre-construction activities, including loading and unloading, cleaning of mechanical toilets, deliveries, truck idling, backup beeps, yelling, and radios also are limited to these construction noise hours.
 - No construction shall be permitted outside of these hours that creates construction noise, except in emergencies, including maintenance work on the City rights-of-way that might be required.
 - All construction equipment powered by internal combustion engines shall be properly muffled and maintained.
 - Unnecessary idling of internal combustion engines is prohibited.
 - All stationary noise-generating construction equipment such as tree grinders and air compressors are to be located as far as is practical from existing residences.

Quiet construction equipment, particularly air compressors, are to be selected whenever possible.

4.10-5: If the Modified Project includes the installation of an on-site sanitary sewer treatment facility, once the installment of this facility has been confirmed, and building plans are filed, prepare a site-specific noise impact study analyzing the facility operational equipment noise level to be conducted and noise generated by this facility. If the noise study determines that noise levels from operation of the on-site sanitary sewer treatment facility exceed acceptable levels for sensitive receptors established by the City, the following mitigation measures shall be implemented.

- Ensure that noise exposure associated with the selected facility equipment satisfies the applicable City noise level limits at proposed sensitive receptors.
- Construct solid noise barriers around the perimeter of the facility equipment area that effectively attenuate equipment noise exposure to a state of compliance with the applicable City noise limits at proposed sensitive receptors.

The following mitigation measures are incorporated by reference from the San Francisco Bay Trail at Point Molate IS/MND:

BIO-1: Prior to construction, EBRPD or a qualified botanist shall pin flag or mark locations of special-status plant species along the alignment. The Project shall avoid impacts to special-status plant species where possible, however, where impacts cannot be avoided, plants shall be translocated or replanted in the project vicinity or nearest suitable habitat. Prior to the initiation of construction, a qualified botanist shall conduct a focused survey for marsh gumplant and Suisun marsh aster within the construction footprint during the appropriate blooming period (April through November). The survey will be conducted in accordance with the CDFW's Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (CDFG 2009).

BIO-2: If any construction activities (e.g., grubbing, grading, removal of one tree) are scheduled during the bird nesting season (typically defined by CDFW as

February 1 to September 1), a qualified biologist shall conduct a preconstruction survey for nesting birds no more than 5 days prior to the start of work, or as otherwise specified by permit conditions. If the project is suspended and delayed for 10 or more days another nesting survey shall be conducted 2 days prior to resuming work. If the survey indicates the presence of nesting birds, a qualified biologist shall delineate a buffer zone where no construction will occur until the biologist has determined that all young have successfully fledged, or until otherwise approved by CDFW. The size of the buffer(s) shall be determined by the project biologist in consultation with CDFW and be based on the nesting species and its sensitivity to disturbance.

BIO-3: Prior to ground-disturbing activities, a biologist shall conduct visual pre-construction surveys for California Ridgway's (formerly Clapper) rail, and California black rail within suitable habitat and surrounding areas. Suitable habitat on site is limited to marsh and mud flat areas near Castro Point. If the rails or other sensitive species are observed on or near the site, the biologist will establish buffers around which no disturbance can occur until the biologist determines a work can proceed within the area or the species do not occur within the area.

BIO-4: Measures shall be taken to avoid impacts to monarch butterflies if present on site. If eucalyptus trees at the northern end of the trail are proposed for removal, a biologist shall conduct a survey for monarch butterflies during the winter roosting season when monarch butterfly roosting colonies would be expected to occur (typically October to February). If present, an avoidance plan will be developed by a biologist for implementation during construction. If monarch butterflies are present, grading, excavation, and eucalyptus tree removal shall be restricted from August 1 through March 31.

4.3.2: Implementation of the Modified Project will have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations, or by the CDFW or USFWS.	S	Implement Mitigation Measures 4.3-4, 4.3-6, 4.3-9, 4.8-1 and 4.8-2. 4.3-11: Impacts to coastal scrub shall be mitigated at a 1.5:1 acre ratio, such that for each acre impacted, no less than 1.5 acres of in-kind habitat shall be created, restored, or preserved. The following activities shall occur related to coastal scrub mitigation:	LTS	No New or Substantially More Significant Impact
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- Those 12.7 acres of invasive scrub habitat within the Open Space and not impacted by grading shall be removed and replaced with coastal scrub habitat similar to native coastal scrub habitat present on the project site. These acres shall be managed and monitored annually for a minimum of five years. A qualified biologist shall prepare an annual report on the status of habitat restoration activities with recommendations on adaptive management measures as necessary. Mitigation shall be deemed complete when, after five years of management and monitoring, the qualified biologist determines that the mitigation has achieved a 75 percent native plant cover within the coastal scrub areas. Additional years of management and reporting shall occur should mitigation fail to meet success criteria. These reports shall be maintained by the project Applicant and available to agencies upon request. Specific management and maintenance procedures shall be included within the Open Space Plan.
- Those 32.6 acres of coastal scrub habitat within the Open Space and not impacted by grading shall be preserved.
- Of those acres defined in (2), habitat restoration and enhancement activities shall occur such that overall mitigation of (1) and (2) above and the replanting of graded areas result in mitigation at a ratio of not less than 1.5 acres restored and preserved per 1 acre of impact. Coastal scrub mitigation areas shall be managed and monitored for a total of five years to remove and prevent the further encroachment of invasive scrub. A qualified biologist shall prepare an annual report on the status of preserved habitat with recommendations on adaptive management for invasive species as necessary. These reports shall be maintained by the project Applicant and available to agencies upon request. Specific management and maintenance procedures shall be included within the Open Space Plan required by **Mitigation Measure 4.3-12**.
- Grading areas that remove coastal scrub or invasive scrub habitat shall be replanted with

coastal scrub habitat as possible in concurrence with or following stabilization of the grading area. Those acreages necessary to reach the mitigation goal of 1.5:1, should additional acreage be necessary beyond (1) and (3) above, shall be subject to the same monitoring, management, and reporting requirements as detailed in (1) above.

Restoration and management efforts shall include an emphasis on creating and maintaining a native coastal grass understory as appropriate. Identification of coastal scrub preservation, restoration, and/or creation areas shall be reviewed and approved by the City through the Open Space Plan.

4.3-12: An Open Space Plan shall be established by the Applicant for the proposed open space and shoreline park that would be held in ownership by the City. The Open Space Plan shall act as a guide in implementing mitigation related to sensitive habitat preservation, creation, and restoration. The Open Space Plan shall additionally act as a binding agreement between the project Applicant and the City to identify final project impacts following lot development, to locate mitigation areas, and to assure completion of mitigation by the Applicant. The Open Space Plan shall include, at a minimum, the following:

- Approved activities within Open Space. These activities shall be predominantly passive and include activities such as maintenance, monitoring, and public access along dedicated trails.
- Maintenance activities of trails such that trails are clearly defined and are not overgrown with foliage. These activities shall be designed to promote visitors to stay on pathways and to reduce the likelihood of disturbing sensitive habitat.
- Compliance with the tree removal permits and Urban Greening Master Plan requirements on City land.
- A description of any habitat preservation, creation, or restoration completed within Open Space for coastal scrub, coastal terrace prairie, mixed riparian, seasonal wetland, or ephemeral

drainage habitats. This shall include a final statement of project impact acreages by habitat type, and a map clearly defining where preservation and mitigation areas are located.

- To the degree feasible, the Open Space Plan shall emphasize the removal of invasive plants, and their replacement with native plant species. Replacement plant species shall emphasize the use of locally rare, culturally significant, or ecologically important species.

A qualified biologist shall prepare the Open Space Plan, and a qualified biologist shall perform any recommended monitoring, reporting, and adaptive management recommendations to reach performance criteria as they relate to the Open Space Plan and sensitive habitat mitigation required for the Modified Project. The City shall review and approve the Open Space Plan. The City may choose to consult with the CDFW, USFWS, and other agencies as appropriate. The Applicant shall be responsible for ensuring that the Open Space Plan is completed prior to ground disturbance and that all mitigation and monitoring occurs as detailed in the approved Open Space Plan.

4.3-13: Vegetation management shall be included as a component of the Covenants, Conditions, and Restrictions of the Home Owner's Association (HOA). The HOA shall be responsible for ensuring that the following are achieved related to vegetation management:

- Landscaping established and maintained by the Home Owner's Association shall be consistent with the aesthetics and functionality of the landscape with an emphasis on the use of native plants within landscaping designs. Trees planted in these areas shall consist of those species native to the Project Site.
- Native vegetation shall be sourced locally as feasible.
- Landscaping and removal of vegetation shall not occur within the designated Open Space except as provided within the Open Space Plan or for the purpose of safety.

Additionally, the HOA shall ensure that residences

minimize overall impacts to sensitive habitats through the following measures:

- The HOA shall provide new residents with information on native species and encourage their use on private landowner parcels.
- The HOA shall provide new residents with information on the sensitive habitats present on the Project Site and the importance of these habitats.
- The HOA shall prohibit the planting of non-native tree species.

4.3-14: Mixed riparian habitat shall be avoided as practical through project design. Setbacks at a minimum of 50 feet, or the largest buffer possible when 50 feet is not feasible, shall be established with high-visibility fencing by a qualified biologist around all areas of avoided mixed riparian habitat. The biologist may require a larger setback after consideration of the soil types, slope between the buffer and construction, hydrology, vegetation, and runoff potential. Un-impacted mixed riparian habitat adjacent to impacted mixed riparian habitat shall also be demarcated with high visibility markers. A qualified biologist shall be present during development activities that ensue within 50 feet of the fenced riparian setbacks. The qualified biologist shall act as a construction monitor to ensure the fencing remains intact and that construction activities do not occur within these avoidance buffers. No staging of equipment or other construction-related activities shall occur within non-impacted mixed riparian habitat or buffers established by the qualified biologist.

Additionally, the project Applicant shall provide CDFW with the proper notification of impacts to ephemeral drainages and associated riparian habitat for those impacted drainages supporting mixed riparian habitat. All compensatory action required through the appropriate LSAA permit for impacts to riparian habitat shall be adhered to. This shall include, but is not limited to, habitat preservation and/or habitat restoration of in-kind habitat exceeding 1:1, or creation of habitat at a minimum of 1:1.

Mitigation for direct impacts to mixed riparian habitat not covered under an LSAA shall occur through a combination of habitat preservation and/or restoration and

shall, at a minimum, include the following:

- Should mitigation occur through preservation, preservation shall occur at a minimum ratio of 2:1. Areas designated for preservation shall be maximized within designated open space, and shall not occur within residential lots. Those areas selected for preservation shall be approved by the City and shall be subject to the compensatory actions set forth in this mitigation. Preservation areas shall be identified within the Open Space Plan.
- When mitigation occurs through the enhancement or restoration of habitat, mitigation shall occur at a minimum ratio of 2:1. Restoration and/or enhancement of habitat shall occur within designated open space as possible. Monitoring of mitigation activities shall be performed by a qualified biologist for a minimum of three years. The qualified biologist shall prepare an annual report on the progress of mitigation with recommended management actions. These reports shall be submitted to the City and available to agencies upon request. Mitigation shall be deemed complete once the qualified biologist has determined that the success or establishment of restoration or enhancement activities meets or exceeds 80 percent. The qualified biologist may utilize bank stabilization, percent native ground cover, relative ratios of the herbaceous, shrub, and tree layers, as well as other habitat quality indicators in order to determine the level of success. At a minimum, ground cover shall meet or exceed 80 percent, with a native plant cover percent meeting or exceeding that of impacted mixed riparian habitat. Additional years of management and reporting shall occur should mitigation fail to meet success criteria. Specific management and maintenance procedures shall be included within the Open Space Plan.

4.3-15: The beach strand habitat onsite shall be completely avoided. Replacement/restoration is not appropriate for this habitat type due to its inherent intrinsic value, role as habitat for plant and wildlife species

(including special-status species), increasing threats by development, and its currently limited distribution within the region. The Modified Project shall be designed to avoid beach strand habitat. To assure prevention of direct impacts and avoid indirect impacts to the beach strand habitat onsite during operation, the existing roads and pathways within and adjacent to beach strand habitat shall be used, and no new roadways in beach strand habitat shall be constructed. Improvement of the existing roadways that do not convert beach strand habitat may be implemented as necessary, but no new roadways shall be within beach strand habitat.

To avoid impacts during construction, setbacks shall be established (i.e., staked) around all areas of beach strand habitat within 100 feet of project development. Setbacks at a minimum of 50 feet, or the largest buffer possible when 50 feet is not feasible, shall be established with high-visibility fencing by a qualified biologist around beach strand habitat. Larger setbacks up to 100 feet may be required by the qualified biologist based on the soil type in the area where construction will occur, slope between the construction work and area with beach strand habitat, local hydrology, existing vegetative cover, and runoff potential of construction areas. Prior to the onset of development activities within 100 feet of beach strand habitat, high visibility fencing shall be installed to delineate the beach strand setbacks. A qualified biologist shall be present during any and all development activities that occur within 50 feet of the fenced beach strand setbacks to ensure no indirect impacts occur to beach strand habitat.

4.3-16: Consultation shall occur with USACE in order to verify the presence of jurisdictional wetlands and waters impacted by the Modified Project. The project sponsor shall obtain a Clean Water Act Section 404 permit from the USACE for impacts to jurisdictional wetlands or waters, and a corresponding Clean Water Act Section 401 Water Quality Certification from the San Francisco Regional Water Quality Control Board (SFRWQCB). Typical 404-permit mitigation occurs at a ratio of 1:1 acres created versus impacted and 2:1 acres restored/enhanced versus impacted, though individual permit conditions may vary.

The project sponsor shall provide the required notification to CDFW under Section 1602 of the Fish and Game Code for alteration of the ephemeral drainages and shall obtain an LSAA if required by CDFW prior to ground disturbance. The conditions of these permits, as well as any additional permits related to impacts to biological resources required for the Modified Project, shall be adhered to.

Mitigation for direct impacts to seasonal wetlands and ephemeral drainages not covered under the permits listed above shall occur through a combination of habitat preservation, creation, and/or restoration and shall, at a minimum, include the following:

- Should mitigation occur through preservation, preservation shall occur at a minimum ratio of 2:1. Areas designated for preservation shall be maximized within designated open space, and shall not occur within residential lots. Those areas selected for preservation shall be approved by the City and shall be subject to the compensatory actions set forth in this mitigation and necessary permit conditions.
- Seasonal wetlands may be mitigated for through restoration of habitat at a 2:1 ratio, or creation of habitat at a 1:1 ratio. Restoration and/or creation of habitat shall occur within designated open space as possible. Monitoring of mitigation activities shall be performed by a qualified biologist for a minimum of three years consistent with the terms of necessary permits. The qualified biologist shall prepare an annual report on the progress of mitigation with recommended management actions. These reports shall be submitted to the City and available to agencies upon request. Mitigation shall be deemed complete once the qualified biologist has determined that the success or establishment of restoration or habitat creation activities. The biologist may use a combination of habitat indicators such as ground stabilization, percent native ground cover, relative ratios of the herbaceous, shrub, and tree layers, as well as other habitat quality indicators in order to determine the level of success. At a minimum, native plant cover percent shall meet or

exceeding that of impacted wetland habitat. Ephemeral drainage mitigation shall not be channelized and shall promote stable banks and native plant species. Additional years of management and reporting shall occur should mitigation fail to meet success criteria. Specific management and maintenance procedures shall be included within the Open Space Plan.

- Ephemeral drainages shall be offset by no less than the linear feet length of impacts. Monitoring of mitigation activities shall be performed by a qualified biologist for a minimum of three years consistent with the terms of necessary permits. The qualified biologist shall prepare an annual report on the progress of mitigation with recommended management actions. These reports shall be submitted to the City and available to agencies upon request. Mitigation shall be deemed complete once the qualified biologist has determined that the success or establishment of restoration or habitat creation. The biologist may use a combination of habitat indicators such as ground stabilization, percent native ground cover, relative ratios of the herbaceous, shrub, and tree layers, as well as other habitat quality indicators in order to determine the level of success. Ephemeral drainage mitigation shall not be channelized and shall promote stable banks and native plant species. Additional years of management and reporting shall occur should mitigation fail to meet success criteria. Specific management and maintenance procedures shall be included within the Open Space Plan.

Additionally, setbacks of 50 feet, or the largest setback possible when a full 50 feet is not feasible, shall be established by a qualified biologist around each of the seasonal wetlands or ephemeral drainage features within 100 feet of project development. The biologist may require a larger setback of up to 100 feet after consideration of the soil types, slope between the buffer and construction, hydrology, vegetation, and runoff potential. Setbacks shall be marked off with high visibility fencing prior to the commencement of construction. A qualified biologist shall be present during any and all construction activities that

ensue within 50 feet of any buffer area of seasonal wetlands or ephemeral drainage. The qualified biologist shall act as a construction monitor to ensure that indirect impacts from construction to waters/wetlands do not occur and the fencing remains intact.

4.3-17: The tidal marsh habitat onsite shall be completely avoided. A minimum setback of at least 50 feet shall be established around the tidal marsh habitat to prevent any impacts during construction. The exact width of the tidal marsh setback may be larger based on specified conditions of associated permits from the BCDL, USACE, or other jurisdictional agencies.

Prior to commencement of construction, high visibility fencing shall be installed to delineate the tidal marsh setback. A qualified biologist shall be present during any and all development activities that ensue within 50 feet of the fenced tidal marsh setback. The qualified biologist shall act as a construction monitor to ensure the fencing remains intact and that construction activities do not disturb habitat within this setback buffer.

4.3-18: Impacts to coastal terrace prairie shall be mitigated at a 2:1 ratio, such that for each acre impacted, no less than two acres of in-kind habitat shall be created, restored, or preserved. The following activities shall occur related to coastal terrace prairie mitigation:

- Those 6.2 acres of coastal terrace prairie habitat within the Open Space and not impacted by grading shall be preserved. These acres shall be managed and monitored for a total of five years to prevent significant increase in invasive grasses cover. A qualified biologist shall prepare an annual report on the status of preserved habitat with recommendations on adaptive management for invasive species as necessary. These reports shall be maintained by the project Applicant and available to agencies upon request. Specific management and maintenance procedures shall be included within the Open Space Plan.
- Those 18.8 acres of invasive annual grassland habitat within the Open Space and not impacted by grading are suitable for restoration to a coastal terrace prairie composition and shall be restored

such that the minimum 2:1 mitigation ratio is achieved. Areas where annual grasslands have been impacted by grading may also be areas that are suitable for restoration to coastal terrace prairie. These acres shall be managed and monitored annually for a minimum of five years. A qualified biologist shall prepare an annual report on the status of habitat restoration activities with recommendations on adaptive management measures as necessary. Mitigation shall be deemed complete when, after five years of management and monitoring, the qualified biologist determines that the mitigation has achieved successful conversion of annual grassland to coastal terrace prairie habitat, with a percent native grass cover equal to or exceeding the average percent cover of native grasses of preserved coastal terrace prairie. Additional years of management and reporting shall occur should mitigation fail to meet success criteria. These reports shall be maintained by the project Applicant and available to agencies upon request. Specific management and maintenance procedures shall be included within the Open Space Plan.

- Grading areas that remove coastal terrace prairie or annual grassland habitat shall be replanted with coastal terrace prairie habitat as possible in concurrence with or following stabilization of the grading area. Those acreages necessary to reach the mitigation goal of 2:1, should additional acreage be necessary beyond (1) and (2) above, shall be subject to the same monitoring, management, and reporting requirements as detailed in (2) above.

Identification of coastal terrace prairie preservation, restoration, and/or creation areas shall be reviewed and approved by the City through the Open Space Plan.

The following mitigation measures are incorporated by reference from the San Francisco Bay Trail at Point Molate IS/MND:

BIO-5: After construction is complete, EBRPD or the

construction contractor shall replant native trees and native shrubs in the immediate vicinity of the Project at a 3:1 mitigation ratio, or a replacement ratio as determined by regulatory agencies and specified in environmental permits obtained through the Joint Aquatic Resources Permit Application (JARPA) if it results in a greater number of replacement trees.

BIO-6: During construction, the contractor shall avoid and minimize the spread of invasive or noxious weed species. Equipment shall be cleaned and free of weeds, and seeds prior to being used on site. The EBPRD or a qualified contractor will write a site-specific Invasive Plant Plan to specify how the plan shall be implemented to avoid and minimize the introduction and spread of invasive plant species and seeds.

<p>4.3.3: Implementation of the Modified Project may have a substantial adverse effect on State or federally protected wetlands through direct removal, filling, hydrological interruption or other means.</p>	PS	<p>Implement Mitigation Measures 4.3-16 through 4.3-18, 4.8-1 and 4.8-2.</p> <p>4.3-19: The project sponsor shall obtain an approved jurisdictional delineation from USACE prior to the commencement of construction to determine whether the wetlands and waters on the Project Site are jurisdictional under the CWA. A CWA Section 404 permit and CWA Section 401 certification for impacts to any jurisdictional features shall be obtained prior to ground disturbance. For those features that are not jurisdictional under the Clean Water Act but are waters of the State, the project sponsor will secure waste discharge requirements from the RWQCB prior to commencement of construction.</p> <p>The Modified Project shall avoid jurisdictional waters to the extent practicable through project design. Setbacks of a minimum 50 feet, or maximum possible when a full 50 feet is not practicable, shall be established by a qualified biologist around each of the wetland features within 100 feet of project development, unless the soils, slope, hydrology, vegetation, and runoff potential determine that a greater buffer distance up to 100 feet is required. Setbacks would be demarked by installation of high visibility fencing prior to the commencement of construction activities. A qualified biologist shall be present during any and all construction activities that ensue within 50 feet of the wetlands or waters buffers.</p>	LTS	<p>No New or Substantially More Significant Impact</p>
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The qualified biologist shall act as a construction monitor to make sure the fencing remains intact and that construction activities do not occur within the wetlands or waters avoidance buffer areas. Permit terms and conditions related to buffers shall supersede buffers presented herein in case of conflict.

The following mitigation measures are incorporated by reference from the San Francisco Bay Trail at Point Molate IS/MND:

BIO-7: To reduce potential short-term impacts to the upland wetland, the contractor shall implement the following avoidance measures and BMPs:

- Install temporary silt fencing beyond the outer edge of the wetland boundary to prevent entry of fill into the wetland during construction. Temporary silt fencing will also reduce the likelihood of wildlife from entering the work area.
- Place temporary Environmentally Sensitive Area (ESA) fencing where needed to prevent construction equipment and workers from entering the upland wetland.

4.3.4: Implementation of the Modified Project may interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory corridors, or impede the use of native wildlife nursery sites.	PS	<p>The following mitigation measures are incorporated by reference from the San Francisco Bay Trail at Point Molate IS/MND:</p> <p>BIO-8: Fencing and other structures associated with development of the San Francisco Bay Trail shall be designed and constructed in a manner that does not impede wildlife movement.</p>	LTS	No New or Substantially More Significant Impact
4.3.5: Implementation of the Modified Project may conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance.	PS	<p>Implement Mitigation Measures 4.3-12 and 4.3-13.</p> <p>4.3-20: Should ground-disturbance activities commence within eucalyptus woodland within monarch over-wintering season (October 1 through February 28), a preconstruction survey shall be completed by a qualified biologist to determine the presence or absence of roosting monarch butterflies. Should no roosts be identified, no further mitigation is necessary. Should active monarch butterfly roost trees be identified, the tree shall not be removed until after the qualified biologist has determined</p>	LTS	No New or Substantially More Significant Impact

that the monarch butterflies have vacated the roost. Active roost trees shall be protected with a construction buffer demarcated by a qualified biologist with high-visibility fencing or flagging around the outer boundary of the active roosting habitat. The buffer shall remain until it is determined by the biologist that the roost is no longer active.

4.3-21: The Modified Project shall maximize the use of native trees consistent with the City Urban Greening Master Plan's recommendations on tree species and planting specifications. Trees removed on City land as a result of the Modified Project shall be mitigated for in the following way:

- Permitted removal of native trees shall be replanted at an in-kind 2:1 ratio.
- Permitted removal of non-native trees shall be replaced with a native tree recommended within the Urban Greening Master Plan at a 2:1 ratio.
- Planted trees shall be monitored annually by a qualified biologist for a minimum of three years. Mitigation shall achieve a minimum success rate of 75 percent survival after three years. The annual report shall be submitted to the City and shall include information on tree planting locations, health of trees, diameter at breast height (if applicable), and the number and location of necessary plantings to replace failed trees. Additional years of monitoring and maintenance activities may be required to achieve success criteria

Use of compensatory tree plantings shall be maximized within public access areas such as parks and along roadsides, and spacing shall be consistent with the street-tree requirements in the City's Urban Greening Master Plan.

The following mitigation measures are incorporated by reference from the San Francisco Bay Trail at Point Molate IS/MND:

BIO-9: The EBRPD or its construction contractor shall obtain a tree removal permit from the City of Richmond

		superintendent, or equivalent, for removal or pruning of trees at least three days prior to when work shall occur. Proposed tree removal shall be completed within 30 days of obtaining the permit.		
		BIO-10: The construction contractor shall be responsible for providing, installing, and maintaining tree and shrub protection in active work areas for the duration of construction.		
4.3.6: Implementation of the Modified Project is not likely to conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan	NI	No mitigation is required.	NA	No New or Substantially More Significant Impact.
4.3.7: Implementation of the Modified Project is not likely to increase public exposure to disease vectors or increase potential disease vector habitat	LTS	No mitigation is required.	NA	NA
4.3.8: Implementation of the Modified Project may have significant cumulative biological resources impacts.	PS	Implement Mitigation Measures 4.3-1 through 4.3-21, 4.8-1, 4.8-2, 4.10-1, 4.10-5, and BIO-1 through BIO-10.	LTS	No New or Substantially More Significant Impact
4.4 Cultural Resources and Tribal Cultural Resources				
4.4.1: Implementation of the Modified Project may cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5.	PS	4.4-1: The City shall not issue demolition permits associated with demolition or construction in the Winehaven Historic District until the HPC has reviewed the application to ensure that the building proposed to be demolished is not a contributor to the Winehaven District. 4.4-2: The Modified Project Applicant shall develop comprehensive Design Guidelines that comply with the Secretary of the Interior's Standards and Guidelines for the Treatment of Historic Properties that will govern the rehabilitation of buildings within the Historic District as well as new construction within the Historic District. The Design Guidelines shall be reviewed and approved by the HPC prior to the issuance of demolition permits to ensure that they would result in a project that complies with the Secretary of the Interior's Standards for Rehabilitation; (2) would result in buildings that are compatible with the Historic District; and (3) require preservation of the historic	LTS	No New or Substantially More Significant Impact

materials and character-defining features of the buildings, and repair instead of replacement of deteriorated features, where feasible. In addition, the City shall not issue building permits associated with the Historic District until HPC staff concur that the design of the buildings associated with those permits conforms to the Design Guidelines as part of its review pursuant to Zoning Code section 15.04.303.120. Provisions that must be included in the Design Guidelines include the following.

- a. All work within the Historic District shall be performed in keeping with the Secretary's Standards and Guidelines for the Treatment of Historic Properties (the "Standards").
- b. Alterations to contributing buildings shall be conducted in a sensitive manner consistent with the Standards, and will preserve materials, features, and finishes of contributing resources to the extent feasible. Deteriorated features will be repaired whenever feasible, and when not feasible, these features will be replaced "in kind," matching the original in design, color, texture, and materials, whether these materials are wood, masonry (e.g., brick, concrete, or stone), metal, or some other material.
- c. All Historic District contributing buildings shall be retained. Demolition of existing construction or removal of historically significant features shall be limited and shall meet requirements listed in the Secretary of the Interior's Standards and Guidelines for the Treatment of Historic Properties. Any demolition activities shall be conducted in a manner that shall be sensitive to and protective of Historic District contributors and/or their character-defining features.
- d. Preserve contributing sections of the railway system except if doing so conflicts with remediation requirements. If preservation is not feasible, then the sections of railway tracks shall be replaced in kind.
- e. New buildings constructed within the Historic District boundary shall be consistent with the Standards, including Standard 9, which requires any new construction to be differentiated from but compatible with existing historic buildings.
- f. Prior to the alteration of any contributing buildings within the Historic District, the 1995 Historic

American Building Survey documentation shall be reviewed and updated, if needed.

- g. Damaged or deteriorated brickwork throughout any brick structure shall be repaired or replaced to match the existing brickwork; if the painted-on Air Raid Shelter signs are removed, they shall be professionally photographed prior to damage or destruction.
- h. Any work involving the relocation of utilities, water, sewer, or electrical facilities shall avoid impacts to the visual character of the Historic District and its contributing buildings. Installation of any new utility features in visually prominent sites within the District or adjacent to its contributing buildings shall be avoided.

In the cases that contributing buildings must be relocated, these relocations shall be conducted in a manner that, to the greatest extent possible, retains the moved building's existing spatial relationships with other contributing buildings in the Historic District and does not compromise their historic significance; i.e., their ability to contribute to the Historic District.

- i. Provide open space, or the impression of space, between Building No. 1 and any new construction immediately adjacent to it to the north or south. Maintain a clear line of sight through the gap south of Building 1 to the power house and hillside.
 - j. Limit vertical development directly west of Building No. 1 between Building No. 1 and the Bay to small structures, such as kiosks or park amenities, which shall be sensitively designed and placed to maintain overall views between Building No. 1 and the Bay in keeping with the Standards.
 - k. Any new public entrances added to Building #1 shall be designed to be compatible with the character of the building.
 - l. Reconfiguration of Stenmark Drive should de-emphasize the physical division of the east and west portions of the Historic District. Use landscaping to help minimize the visual division.
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The following mitigation measures are incorporated by reference from the San Francisco Bay Trail at Point Molate IS/MND:

CUL-1: The EBRPD or its construction contractor shall obtain a tree removal permit from the City of Richmond superintendent, or equivalent, for removal or pruning of trees at least three days prior to when work shall occur. Proposed tree removal shall be completed within 30 days of obtaining the permit.

<p>4.4.2: Implementation of the Modified Project may substantially cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5.</p>	PS	<p>4.4-3:</p> <ul style="list-style-type: none"> a. The Applicant shall retain a qualified professional archaeologist to monitor any ground disturbing activities associated with widening Stenmark Drive or constructing utility systems that are (a) within a 50 foot radius of the mapped boundaries of CA-CCO-284 and (b) anticipated to extend 2.0 feet or more below the current ground surface. If intact features, burials, or diagnostic artifacts are found during construction, the archaeologist shall stop work within a 50-foot radius of the find investigate, document, or otherwise recover the finds in accordance with current professional standards and the unanticipated discoveries requirements (see below). Work shall not resume in the stop-work area until the archeologist determines work can safely proceed. b. The Applicant shall maintain a protective buffer of 50 feet around CA-CCO-506H during construction. CA-CCO-506H is located away from most development and infrastructure improvements, however the full extent of subsurface deposits is unknown. Any construction that could extend more than 2.0 feet below ground surface shall, wherever feasible, remain outside the buffer established for CA-CCO-506H. The Applicant shall retain a qualified professional archaeologist to monitor any ground-disturbing activity within the buffer that is expected to exceed 2.0 feet below surface. If intact features, burials, or diagnostic artifacts are found during construction, the archaeologist shall stop work within a 50-foot radius of the find, investigate, document, or otherwise recover the finds in accordance with current professional standards 	LTS	<p>No New or Substantially More Significant Impact</p>
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- and **Mitigation Measure 4.4-4**. Work shall not resume in the stop-work area until the archeologist determines work can safely proceed.
- c. Any project-related construction or grading shall avoid the known boundaries of CA-CCO-283 by a minimum of 50 feet in any direction whenever feasible. Where soil-disturbing activities approach closer than 50 feet, the Applicant shall retain a qualified professional archaeological monitor. If intact features, burials, or diagnostic artifacts are found during construction, the archeologist shall stop work within a 50-foot radius of the find, investigate, document, or otherwise recover the finds in accordance with current professional standards and **Mitigation Measure 4.4-4**, and, if applicable, **Mitigation Measure 4.4-5**. Work shall not resume in the stop-work area until the archeologist determines work can safely proceed.
 - d. Prior to the beginning of grading (including ground-clearing) or any construction (including structure relocation), a qualified professional archeologist shall administer a cultural resources awareness training program to all construction workers who will be performing grading or construction work. The program shall include a review of the types of finds that could occur, regulatory requirements, and a list of contacts (with telephone numbers) in case of accidental discoveries. The training program shall be repeated periodically as new construction workers are added to the project.

4.4-4: The project proponent shall have a qualified archeologist observe all ground-disturbing activities. If unidentified cultural resources are encountered during ground-disturbing activities, work in the immediate area and within 50 feet of the discovery shall halt and the qualified archeologist shall evaluate the resource's significance through a study of its features and artifacts. Construction activities can continue in areas 50 feet away from the find and not associated with the cultural resource location. If the resource is determined not to be significant, no further archaeological investigation or mitigation shall be required. If the find is determined to be a potentially significant archeological resource or TCR, a qualified archeologist, in consultation with the Planning Director or

designee at the City of Richmond, the project proponent, and the Native American monitor, where a potential TCR, shall determine whether preservation in place is feasible. If preservation in place is infeasible in light of project design or layout, or is unnecessary to avoid significant effects, a Cultural Resources Data Recovery Plan (CRDRP) shall be developed by the qualified archaeologist and, if the find is a TCR, the tribal monitor, to outline excavation and laboratory procedures, and if appropriate, curation at a university depository or other, if a TCR, other treatment considered appropriate by the tribe. The plan shall be submitted to the City for review and approval prior to proceeding with grading and construction activities in the area around the find.

The CRDRP shall identify a proposed data recovery program, and how the data recovery program would preserve the significant information the archaeological resource is expected to contain. Treatment of unique archaeological resources shall follow the applicable requirements of Public Resources Code Section 21083.2. Treatment for most resources would consist of (but would not be not limited to) sample excavation, artifact collection, site documentation, and historical research, with the aim of targeting the recovery of important scientific data contained in the portion(s) of the significant resource to be impacted by the project. The CRDRP shall include provisions for analysis of data in a regional context; reporting of results within a timely manner and subject to review and comments by the appropriate Native American representative, where applicable, before being finalized; curation of artifacts and data at a local facility acceptable to the City and appropriate Native American representative, if applicable; and dissemination of final confidential reports to the appropriate Native American representative, if applicable, the Northwest Information Center of the California Historical Resources Information System and the City.

The following mitigation measures are incorporated by reference from the San Francisco Bay Trail at Point Molate IS/MND:

Implement **Mitigation Measure CUL-1**.

4.4.3: Implementation of the Modified Project may disturb any human remains, including those interred outside of formal cemeteries.	PS	<p>Implement Mitigation Measure 4.4-3 and 4.4-4</p> <p>4.4-5: If human remains are encountered during construction activities, work within 50 feet of the find shall halt immediately and the County Coroner shall be notified in accordance with California HSC § 7050.5 and a qualified archeologist also shall be notified. The coroner will examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or state lands, as per Section 7050.5(b) of the Health and Safety Code. If the coroner determines that the remains are those of a Native American, the coroner will contact the NAHC by phone within 24 hours of making that determination, as per Section 7050(c) of the HSC. The Applicant will act on notification of a discovery of Native American human remains in compliance with Section 5097.9 of the California Public Resources Code. The Applicant and the professional archaeologist are required to contact the Most Likely Descendent (MLD), as determined by the NAHC, regarding the remains. The MLD, in cooperation with the property owner and the lead agencies, will determine the ultimate disposition of the remains. The MLD has 48 hours from the time of being granted access to the site by the landowner to inspect the discovery and provide recommendations to the landowner for the treatment of the human remains and any associated grave goods. In the event that no descendant is identified or the descendant fails to make a recommendation for disposition, the landowner may, with appropriate dignity, reinter the remains and burial items on the property in a location that will not be subject to further disturbance.</p> <p>The following mitigation measures are incorporated by reference from the San Francisco Bay Trail at Point Molate IS/MND:</p> <p>CUL-3: Any human remains encountered during project ground disturbing activities should be treated in accordance with California Health and Safety Code Section 7050.5. The District and the County of Contra Costa should verify that the following directive has been included in the appropriate contract documents: "If human remains are uncovered, work within 25 feet of the discovery shall be redirected and the County Coroner</p>	LTS	No New or Substantially More Significant Impact
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		<p>notified immediately. At the same time, an archaeologist shall be contacted—if one is not already on site—to assess the situation and consult with agencies as appropriate. Project personnel shall not collect or move any human remains or associated materials. If the human remains are of Native American origin, the Coroner must notify the Native American Heritage Commission within 24 hours of this identification. The Native American Heritage Commission will identify a Native American Most Likely Descendant (MLD) to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods.”</p>		
<p>4.4.4: Implementation of the Modified Project may cause a substantial adverse change in the significance of a tribal cultural resource as defined in PRC § 21074</p>	PS	<p>Implement Mitigation Measure 4.3-4, 4.3-6, 4.4-3, 4.4-4, 4.8-1 and 4.8-2</p> <p>4.4-6: The project proponent shall invite Guidiville to choose a monitor and participate in monitoring ground-disturbing activities at least two months before activities begin.</p> <p>4.4-7: The Applicant shall include the four culturally significant plants identified as TCRs (<i>Dichelostemma multiflorum</i>, <i>Dichondra donnelliana</i>, <i>Elymus glaucus</i> ssp. <i>jepsonii</i>, and <i>Grindelia stricta</i> var. <i>platyphylla</i>) in vegetation buffers (with interpretive signs) in an area within the Project Site that is open to visitors, including members of the Tribe. The Tribe must be able to harvest the plants if desired. In addition, the Modified Project shall construct and/or rehabilitate an uphill trail east of the proposed development that contains periodic interpretive panels, sitting areas, and learning exhibits that tell the story of the early inhabitants of the area. If allowed by the San Francisco Bay Conservation and Development Commission, interpretative panels with the Project Site’s history should also be placed near the beach.</p>	LTS	No New or Substantially More Significant Impact
<p>4.4.5: Implementation of the Modified Project may have significant cumulative impact to cultural, tribal and paleontological resources.</p>	PS	<p>Implement Mitigation Measures 4.3-2, 4.3-4, 4.3-6, 4.4-2 through 4.4-5, 4.4-7, 4.8-1, 4.8-2, and CUL-1.</p>	LTS	No New or Substantially More Significant Impact
4.5 Energy				
<p>4.5.1: Implementation of the Modified Project may have significant environmental impacts due to wasteful, inefficient, or unnecessary</p>	PS	<p>Implement Mitigation Measures 4.2-1(f) and 4.2-2 4.13-6: In addition to the TDM measures incorporated into</p>	LTS	No New or Substantially More

consumption of energy resources.	<p>the Modified Project design (Section 3.4.3.4), the Applicant shall implement the following strategies to reduce vehicle trips generated by the Modified Project.</p> <ol style="list-style-type: none"> 1. BART Shuttle – The Modified Project shall include a frequent (20-minute headways) direct weekday shuttle service between the Project Site and the Richmond BART Station for two hours during both the peak morning and evening commute periods. This service could be operated by a private contractor or by AC Transit. Shuttles shall be electric and fully accessible to passengers using wheelchairs and other mobility services and should have the capacity to transport bicycles. It is also recommended the Modified Project explore providing a real-time smart-phone app that tracks real-time arrivals to make shuttle use more reliable and convenient. 2. Guaranteed Ride Home – The Modified Project shall include a guaranteed ride home program which would provide employees and commuters who rideshare to work with a reimbursed ride home in the event of unexpected circumstances. 3. Preferential Parking for Carpoolers – The building management shall offer free or discounted preferential carpool parking for eligible commuters. To be eligible for carpool parking, the carpool shall consist of three or more people. The building management shall monitor and provide adequate carpool spaces to meet and exceed potential demand. 4. Preferential Parking for Vanpools – The building management shall offer free or discounted preferential vanpool parking for eligible commuters. The building management shall monitor and provide adequate carpool spaces to meet and exceed potential demand. 5. Commute Center – The Modified Project shall provide a commute information center that may include an information board or kiosk located in a common gathering area. The kiosk will contain transportation information, such as Emergency Ride Home, transit schedules, bike maps, and 511 ride-matching. 6. Bi-Annual Employee Transportation Surveys – The Modified Project shall conduct surveys to 	Significant Impact
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		determine the transportation and travel characteristics of the employees working onsite. The goal of the survey would be to identify the best practices for shifting employees to alternative transportation or high occupancy vehicle modes.		
		7. On-Site Amenities – The Modified Project shall provide a minimum of three trip reducing on-site amenities. Typical features could include: banks, grocery stores, clothes cleaners, exercise facilities, child care center, etc. The goal of the Modified Project would be to provide as many of these amenities as is feasible.		
4.5.2: Implementation of the Modified Project is not likely to conflict with a state or local plan for renewable energy or energy efficiency.	LTS	No mitigation is required.	NA	No New or Substantially More Significant Impact
4.5.3: Implementation of the Modified Project is not likely to have cumulative impacts due to increased energy use.	LTS	No mitigation is required.	NA	No New or Substantially More Significant Impact
4.6 Geology, Soils, and Mineral Resources				
4.6.1: Implementation of the Modified Project is likely to directly or indirectly cause potential substantial risk of loss, injury or death due to seismic related hazards.	PS	<p>4.6-1: The following measures shall be implemented to prevent the loss of life or property as a result of development on unstable or expansive soils. Prior to construction of any new buildings or parking structures, a California Registered Civil Engineer or Geotechnical Engineer shall prepare a final geotechnical report that provides design-grade specifications for structural engineering of all new construction and retrofitting of historic buildings. The Project proponent shall submit the final design-level geotechnical report for the City Planning and Building Services Department for review and approval. The report must be compliant with the CBC and incorporate CGS Special Publication 117A guidelines. According to the CBC Chapter 18, the geotechnical report must include, at a minimum, the following.</p> <ul style="list-style-type: none"> ▪ A plot showing the location of the soil investigations ▪ A complete record of the soil boring and penetration test logs and soil samples ▪ A record of the soil profile 	LTS	No New or Substantially More Significant Impact

- Elevation of the water table, if encountered
- Recommendations for foundation type and design criteria, including but not limited to: bearing capacity of natural or compacted soil; provisions to mitigate the effects of expansive soils; mitigation of the effects of liquefaction, differential settlement and varying soil strength; and the effects of adjacent loads
- Expected total and differential settlement
- Deep foundation information in accordance with CBC § 1803.5.5
- Special design and construction provisions for foundations of structures founded on expansive soils, as necessary
- Compacted fill material properties and testing in accordance with CBC § 1803.5.8
- Controlled low-strength material properties and testing in accordance with CBC § 1803.5.9

The report shall also consider the effects of seismic hazard in accordance with CBC § 1803.7.

It is the responsibility of the Project proponent to provide for engineering inspection and certification that earthwork and construction have been performed in conformity with recommendations contained in the report. All recommendations provided in the final design-level geotechnical report must comply with ASCE 7 minimum load requirements.

Recommendations made as a result of these investigations to protect new structures and reduce impacts from geological hazards shall be incorporated into project design and verified through implementation of the Mitigation Monitoring and Reporting Plan. These measures are anticipated to include requirements to construct foundations designed to resist movements of expansive soils and removal of unstable soils and replacement with suitable fill or engineered materials. Based on the geotechnical study (Appendix I of the 2011 FEIR), suitable fill material is available onsite to replace hazardous soils.

If the geotechnical report indicates the presence of critically expansive soils or other issues that could lead to structural defects, a certification of completion of the

requirements of the geotechnical report shall be submitted to the City Planning and Building Services Department prior to issuance of building permits. This shall be noted on the Improvement Plans; in the conditions, covenants, and restrictions (CC&R); and on the Informational Sheet filed with the Final Subdivision Map(s). The geotechnical feasibility memo, dated September 19, 2019 and included as **Appendix R**, indicated the presence of potentially expansive soils and landslides, that must be addressed in a design-level geotechnical report. At a minimum, the following recommendations of the preliminary geotechnical feasibility memo shall be adhered to.

1. If liquefaction is identified, risks shall be avoided by not developing in those areas, by designing structures and improvements for the potential ground movement due to liquefaction, or by reducing the liquefaction hazard through ground improvement or densification. The magnitude of any potential liquefaction in development areas would be assessed prior to determining which method, if any, is needed.
2. Where landslides and colluvium overlap with planned building areas, the landslide debris or colluvium shall be removed and replaced with engineered fill. In areas where deposits lie outside development areas, there shall be a development setback from the area or construction of a toe buttress fill and debris bench. Seismically induced landslide hazards shall be reduced by using engineered stabilization of landslides and removal of colluvial deposits.
3. If lateral spreading hazards are identified, the Applicant would ensure risks are avoided by setting back development from areas subject to significant lateral movement, stabilization of the liquefiable soil along the shoreline, or improvement to the liquefiable soil.
4. If expansive soil is identified, building damage due to volume changes shall be reduced by: (1) using a mat foundation that is designed to resist the settlement and heave of expansive soil (such as post-tensioned), (2) deepening the foundations to below the zone of moisture fluctuation, i.e., by using deep footings or drilled piers, and/or (3) using footings at normal shallow depths but

		<p>bottomed on a layer of select fill having a low expansion potential.</p> <p>5. Existing undocumented, non-engineered fill shall be removed and recompactd in development areas.</p>		
<p>4.6.2: Implementation of the Modified Project is likely to cause substantial soil erosion or loss of topsoil.</p>	S	<p>Implement Mitigation Measure 4.8-1.</p> <p>The following mitigation measures are incorporated by reference from the San Francisco Bay Trail at Point Molate IS/MND:</p> <p>GEO-1: The East Bay Regional Park District (EBRPD) or a qualified contractor shall be required to develop a SWPPP and obtain coverage under the Construction General Permit. To obtain coverage, the EBRPD shall be required to submit and certify the SWPPP and the Permit Registration Documents in the Stormwater Multiple Application Tracking and Reporting System (SMARTS) at least 14 days prior to any ground disturbance.</p> <p>GEO-2: The contractor shall be required to implement the SWPPP throughout construction of the Modified Project until stabilization criteria have been met and a Notice of Termination of coverage under the Construction General Permit has been filed in SMARTS.</p>	LTS	No New or Substantially More Significant Impact
<p>4.6.3: Implementation of the Modified Project is considered development on unstable soil.</p>	PS	<p>Implement Mitigation Measure 4.6-1.</p> <p>4.6-2: The lower areas of the Project Site are likely to have shallow groundwater conditions. During underground construction in these areas, temporary dewatering procedures should be anticipated to lower the free water so that excavation and working areas are kept reasonably dry and stable during construction. Additionally, to reduce long-term effects from potential rises in groundwater, buildings shall be underlain by foundation subdrainage to collect and discharge accumulations of water.</p>	LTS	No New or Substantially More Significant Impact
<p>4.6.4: Implementation of the Modified Project is considered development on expansive soil.</p>	PS	<p>Implement Mitigation Measure 4.6-1.</p>	LTS	No New or Substantially More Significant

				Impact
4.6.5: Implementation of the Modified Project may have significant impacts and cause destruction of a unique paleontological resource or site or unique geologic feature.	PS	Implement Mitigation Measure 4.4-3.	LTS	No New or Substantially More Significant Impact
4.6.6: Implementation of the Modified Project will not have cumulative geology and soils impacts.	LTS	No mitigation is required.	NA	No New or Substantially More Significant Impact

4.7 Hazards, Wildfire, & Hazardous Materials

4.7.1: Implementation of the Modified Project could create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.	PS	4.7-4: Cleanup of environmental contamination shall be conducted under the oversight of, and in direct coordination with, the Regional Water Quality Control Board. Remediation shall be completed to cleanup standards established by the Regional Board as protective of human health and the environment. Cleanup standards will likely vary for each portion of the site, based upon the contaminants detected, the planned use of the site, technical feasibility, and any other factors deemed relevant by the Water Board. Any and all development shall be consistent with deed restrictions or other land use covenants that the Regional Board deems adequate to protect human health and the environment.	LTS	No New or Substantially More Significant Impact
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The following mitigation measures are incorporated by reference from the San Francisco Bay Trail at Point Molate IS/MND:

HAZ-1: Exclusionary fencing shall be installed to keep users from accessing abandoned buildings and other structures that pose a physical hazard. Fencing shall also be installed in areas where HBMs may be present and where contaminated soils occur near the proposed alignment and would not be capped. This may include areas along the eastern edge of Burma Road, the perimeter of buildings at the drum lot, and the inside perimeter of the drum lot.

HAZ-2: The final Plan, Specification and Estimate (PS&E) for the Project shall identify areas where arsenic shall be addressed and require the contractor to comply with the NFD SGWMP, the project-specific soil management plan, and air monitoring plan. The contractor shall be required

		to prepare and Health and Safety Plan. Implementation of the project-specific soil management plan and air monitoring plan, and preparation and implementation of the Health and Safety Plan shall be conducted with oversight by a Certified Industrial Hygienist. During construction, areas of known elevated arsenic shall be either capped in place, relocated and capped, or access discouraged to prohibit users. Areas where soils containing arsenic above background occur beneath the footprint of the trail shall be covered with a minimum of 1-foot of clean fill material. Soils shall not be transported between City and Chevron properties (i.e. between Segment A and Segment B). The Lead Agency shall document that the City has informed/contacted the RWQCB two weeks prior to construction, as required by the SGWMP.		
4.7.2: Implementation of the Modified Project could create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.	PS	No mitigation is required.	LTS	No New or Substantially More Significant Impact
4.7.3: The Modified Project is located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would it create a significant hazard to the public or to the environment.	S	Implement Mitigation Measure 4.7-4. The following mitigation measures are incorporated by reference from the San Francisco Bay Trail at Point Molate IS/MND: HAZ-4: The contractor shall adhere to and incorporate the relevant conditions contained in the 2012 NFD SGWMP. Prior to Project construction, a project specific soils management plan and or equivalent health and safety plan shall be prepared by the contractor under the direction of a certified industrial hygienist, and reviewed by the City of Richmond for consistency with existing contractual requirements.	LTS	No New or Substantially More Significant Impact
4.7.4: Implementation of the Modified Project will significantly impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	S	4.7-1: Prior to the issuance of the first building permit, a site-specific ERP will be developed under the Modified Project to ensure safe evacuation of the Project Site during an emergency in a manner that does not interfere with existing evacuation plans and procedures for	LTS	No New or Substantially More Significant Impact

sheltering in place. The ERP shall identify protocols for evacuation and recommendations regarding emergency supply kits and HEPA filter masks that can be accessed in the case of an earthquake, wildfire, and chemical release. The ERP shall require that the Project Site include a warning system and identify the location of warning devices, such as sirens, on the Project Site and describe how the warning system would be integrated with the Contra Costa Health Services (CCHS) and Community Warning System (CWS). The ERP also shall identify the locations of appropriate refuge areas and emergency evacuation routes, and will address the need for one or more places where people can shelter-in-place as a contingency to evacuation. The ERP shall require community informational sessions to inform citizens of the evacuation procedures, refuge locations, and shelter-in-place procedures and how to appropriately respond during an emergency. Furthermore, signage will be posted on the Project Site that will inform residents and visitors of the location of refuge areas and places to shelter in place. The ERP also shall require the Project proponent to coordinate its emergency plans with CCHS to ensure an adequate level of emergency preparedness for Project Site visitors. Additionally, the ERP shall require the Project proponent to coordinate with the Water Emergency Transportation Authority (WETA) to provide emergency response planning and coordinated water-escape services.

4.13-5: The Applicant shall coordinate all construction activities that would affect traffic flow on Stenmark Drive with local emergency service providers at least one week in advance of construction. Emergency service providers shall be notified of the timing, location, and duration of construction activities. All roads shall remain passable to emergency service vehicles at all times. Stenmark Drive shall remain passable to through traffic 24 hours a day, seven days a week to provide access to and from other land uses located on the San Pablo Peninsula. In the event that portions of Stenmark Drive must be closed temporarily, reasonable detours shall be provided such that access to the San Pablo Yacht Harbor and other adjacent land uses is not restricted.

4.7.5: Implementation of Modified Project may expose people or structures to a significant risk	PS	Implement Mitigation Measure 4.3-13.	LTS	No New or Substantially
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<p>of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.</p>	<p>4.7-2: Any construction equipment that normally includes a spark arrester shall be equipped with an arrester in good working order. This includes, but is not limited to, vehicles, heavy equipment, and chainsaws. During construction, all construction personnel shall have a cell phone or radio system in order to activate 911 if required, a handheld pressurized horn that can be utilized to alert others during an emergency, and be trained in how to properly inform 911 of their work location. All construction vehicles shall be equipped with a 4/ABC or larger fire extinguisher. Every work area shall have one water type fire extinguisher and one round-tip shovel available within 10 feet. Staging areas and areas slated for development using spark-producing equipment shall be cleared of dried vegetation or other materials that could serve as fire fuel. To the extent feasible, the contractor shall keep these areas clear of combustible materials in order to maintain a firebreak. Furthermore, all vegetation mowing activities shall be completed prior to noon. During hot work (e.g. welding), a fire watch shall be utilized 30 minutes during and after the hot work is completed.</p>	<p>More Significant Impact</p>
	<p>4.7-3: Prior to issuance of the first building permit, a site-specific WERP shall be developed by qualified personnel with expertise in wildfire management and in coordination with the Richmond Fire Department. This WERP shall have pre- and post-wildfire response measures. The pre-wildfire response measures shall include actions to reduce damage to property anticipated from wildfire events and ensure evacuation routes are kept clear (e.g. sandbags to mitigate possible landslide and flood damage). The post-wildfire response measures will include fire suppression damage repair and emergency stabilization measures. Fire suppression damage repair could include immediate actions to minimize soil erosion impacts resulting from fire suppression activities that can occur before the wildfire is completely contained. Emergency stabilization could include identifying impending threats to safety and property and then actions immediately implemented to mitigate these identified threats. These actions could include the installation of water run-off and erosion control structures, removal of burnt vegetation, and installation of warning signs.</p>	
	<p>The WERP will also include standards for a five-year long-term recovery and restoration plan to rehabilitate any</p>	

		burned areas. These measures could include restoring burned habitat, reforestation, monitoring fire effects, and treating noxious weed infestations. This would be prepared by qualified personnel with burned area restoration expertise and in coordination with and to the approval of the Richmond Fire Department. Prior to the issuance of the first building permit, the WERP shall be submitted to the Richmond Fire Department for review and approval.		
4.7.6: Due to slope, prevailing winds, and other factors, the Modified Project will significantly exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.	S	Implement Mitigation Measures 4.7-1 and 4.3-13 .	LTS	New Significant Impact
4.7.7: Implementation of the Modified Project may require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.	PS	Implement Mitigation Measures 4.7-2 and 4.3-13	LTS	New Potentially Significant Impact
4.7.8: Implementation of the Modified Project may expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.	PS	Implement Mitigation Measures 4.7-1 and 4.7-3 .	LTS	New Potentially Significant Impact
4.7.9: Implementation of the Modified Project will not create a significant hazard to the project through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment from off-site sources.	NA	No mitigation required.	NA	NA
4.7.10: Implementation of the Modified Project will not have cumulative hazards, hazardous material, and wildfire impacts.	LTS	Implement Mitigation Measures 4.7-1 through 4.7-3 , and 4.3-13 .	NA	No New or Substantially More Significant Impact
4.8 Hydrology and Water Quality				
4.8.1: Implementation of the Modified Project could potentially violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.	PS	Implement Mitigation Measure 4.8-1 and 4.8-2 . 4.8-3: If Wastewater Treatment Variant A is selected, the Applicant shall establish a cooperative agreement with Chevron® prior to the issuance of building permits to set out terms and conditions related to the conveyance of	LTS	No New or Substantially More Significant Impact

recycled wastewater from the Project Site to the Chevron®-Richmond Refinery for subsequent reuse at the Chevron®-Richmond Refinery. The agreement shall clarify that all of the treated wastewater that is not used for irrigation on the Project Site will be directed to the Chevron®-Richmond Refinery, and thus all of the terms and conditions in the agreement will pertain to that amount. Execution of this agreement would not cause Chevron® to exceed the limits of recycled water use defined in existing permits, and no water would be discharged tributary to the Bay under any circumstances. The treatment, conveyance, and use of recycled water shall be in accordance with Title 22 and all other applicable laws. The agreement shall have an expiration date no sooner than 30 years from the development of the Modified Project, and wastewater shall not be treated at the Project Site until this agreement is established.

The following mitigation measures are incorporated by reference from the San Francisco Bay Trail at Point Molate IS/MND:

HYD-1: Implement **GEO-1** and **GEO-2**.

HYD-2: The Lead Agency shall obtain permits from RWQCB to ensure compliance with CWA Section 401.

4.8.2: Implementation of the Modified Project is not likely to substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.	LTS	No mitigation is required.	NA	No New or Substantially More Significant Impact
4.8.3: Implementation of the Modified Project could substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: <ul style="list-style-type: none"> ▪ Result in a substantial erosion or siltation on- or off-site ▪ Substantially increase the rate or amount of surface runoff in a manner which would 	PS	Implement Mitigation Measure 4.8-1 and 4.8-2 .	LTS	No New or Substantially More Significant Impact

<ul style="list-style-type: none"> result in flooding on- or off-site Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff Impede or redirect flood flows 				
4.8.4: In flood hazard, tsunami, or seiche zones, the Modified Project is not likely to cause the release of pollutants due to project inundation.	PS	Implement Mitigation Measure 4.8-1 and 4.8-2 .	LTS	No New or Substantially More Significant Impact
4.8.5: Implementation of the Modified Project could conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.	PS	Implement Mitigation Measure 4.8-1 through 4.8-3 , HYD-1 , and HYD-2 .	LTS	No New or Substantially More Significant Impact
4.8.6: Implementation of the Modified Project could have significant cumulative hydrology and water quality impacts.	PS	Implement Mitigation Measure 4.8-1 through 4.8-3 , HYD-1 , and HYD-2 .	LTS	No New or Substantially More Significant Impact
4.9 Land Use and Planning				
4.9.1: Implementation of the Modified Project is not likely to cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.	LTS	No mitigation is required.	NA	No New or Substantially More Significant Impact
4.9.2: Implementation of the Modified Project is not likely to create cumulative land use impacts.	LTS	No mitigation is required.	NA	No New or Substantially More Significant Impact
4.10 Noise				
4.10.1: Implementation of the Modified Project might cause generation of a substantial temporary or permanent increase in ambient noise levels from construction of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	PS	Implement Mitigation Measure 4.10-1 .	LTS	No New or Substantially More Significant Impacts
4.10.2: Implementation of the Modified Project will not cause generation of a substantial temporary or permanent increase in ambient	LTS	No mitigation is required.	NA	No New or Substantially More

noise levels from operation of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.				Significant Impacts
4.10-3: Implementation of the Modified Project would generate excessive ground-borne vibration or ground-borne noise levels.	S	<p>4.10-2: In order to reduce potential vibration impacts to historic resources, the following construction-related vibration mitigation measures shall be implemented.</p> <ul style="list-style-type: none"> ▪ Prior to the start of any ground-disturbing activity, the Project proponent shall engage a historic architect or qualified historic preservation professional to undertake a pre-construction survey of historical resource(s) within the Historic District to document and photograph the buildings' existing conditions. ▪ Prior to the start of construction, a structural engineer or other qualified entity shall establish a maximum vibration level that shall not be exceeded at each building, based on existing conditions, character-defining features, soils conditions, and anticipated construction practices in use at the time. ▪ To ensure that vibration levels do not exceed the established standard, a qualified acoustical/vibration consultant shall monitor vibration levels at each structure within the Historic District using proper monitoring equipment and shall prohibit vibratory construction activities that generate vibration levels in excess of the standard. Should vibration levels be observed in excess of the standard, construction shall be halted and alternative construction techniques put in practice. ▪ The qualified acoustical/vibration consultant shall conduct regular periodic inspections of each building within the Historic District. Should damage to a building occur as a result of ground disturbing activity on the Project Site, the building(s) shall be remediated to its pre-construction condition at the conclusion of ground-disturbing activity on the Project Site. 	LTS	No New or Substantially More Significant Impacts
4.10.4: Implementation of the Modified Project may result in future traffic noise levels at project sensitive receptors.	PS	4.10-3: Along with the plans submitted for building and/or grading permits for development of a single-family home or townhome along Stenmark Drive, a building specific noise impact study shall be submitted for City review to	LTS	No New or Substantially More Significant

		determine if exterior noise at the building's property line would exceed 65 dBA. If so, then the building would be required to incorporate measures, such as use of sound rated door and window assemblies, mechanical ventilation, careful siting or use of landscaping for outdoor recreation areas, or other methods to reduce interior noise levels to 45 dBA CNEL and provide noise shielding.		Impacts
4.10.5: Implementation of the Modified Project may generate significant project commercial noise levels at proposed sensitive receptors.	PS	<p>4.10-4: Along with the plans submitted for building and/or grading permits for development of commercial and multi-family residential uses, a building-specific noise impact study shall be submitted for City review to demonstrate that interior noise levels for nearby current and proposed sensitive receptors have been reduced to 45 dBA CNEL. The following mitigation measures can be implemented for commercial and multi-family residential uses to reduce noise exposure to the desired level:</p> <ul style="list-style-type: none"> ▪ Ensure that noise exposure associated with the selected mechanical equipment satisfies the applicable City noise level limits at proposed sensitive receptors. ▪ Screen rooftop mechanical equipment to attenuate noise exposure. ▪ Locate mechanical equipment on the rooftop of commercial buildings away from sensitive receptors. ▪ Refuse dumpsters and commercial loading and unloading areas shall be located as far as reasonably possible from the outdoor activity areas of proposed residential buildings. Commercial refuse containers shall also be located such that buildings shield nearby residential uses from noise generated by loading/unloading operations and garbage collection activities. ▪ Use of sound rated door and window assemblies for multi-family residential buildings, if required. 	LTS	No New or Substantially More Significant Impacts
4.10.6: Implementation of the Modified Project may generate project wastewater treatment facility operational noise at the proposed sensitive receptors.	PS	Implement Mitigation Measure 4.10-5.	LTS	No New or Substantially More Significant Impacts
4.10.7: Implementation of the Modified Project may generate significant project construction noise at proposed noise-sensitive receptors.	PS	Implement Mitigation Measure 4.10-1	LTS	No New or Substantially More Significant Impacts

4.10.8: Implementation of the Modified Project will not likely create significant cumulative traffic noise impacts.	LTS	No mitigation is required.	NA	No New or Substantially More Significant Impact
4.11 Population and Housing				
4.11.1: Implementation of the Modified Project would not likely induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through the extension of roads or other infrastructure).	LTS	No mitigation available.	NA	No New or Substantially More Significant Impact
4.11.2: Implementation of the Modified Project would not likely have significant cumulative population and housing impacts.	LTS	No mitigation is required.	NA	No New or Substantially More Significant Impact
4.12 Public Services and Recreation				
4.12.1: Implementation of the Modified Project would not likely result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for Fire Protection and Police Protection.	LTS	No mitigation is required.	NA	No New or Substantially More Significant Impact
4.12.2: Implementation of the Modified Project would not likely result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for schools.	LTS	No mitigation is required.	NA	No New or Substantially More Significant Impact
4.12.3: Implementation of the Modified Project could significantly increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated or include recreational facilities or require the construction or expansion of	PS	4.12-1: The Modified Project shall comply with the City's Quimby Act ordinance by developing sufficient parkland to provide at least 3.0 acres of parkland on the Project Site per 1,000 residents generated by the Modified Project or paying the City's in lieu fee, or a combination of the two methods.	LTS	No New or Substantially More Significant Impact

recreational facilities which might have an adverse physical effect on the environment.				
4.12.4: Implementation of the Modified Project could result in the substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for other public services.	LTS	No mitigation is required.	NA	No New or Substantially More Significant Impact
4.12.5: Implementation of the Modified Project will potentially create potentially significant cumulative public service impacts.	PS	Implement Mitigation Measure 4.12-1.	LTS	No New or Substantially More Significant Impact
4.13 Transportation				
4.13.1: Implementation of the Modified Project will not significantly conflict with program, plan, ordinance, or policy addressing roadways during construction.	LTS	No mitigation is required.	NA	No New or Substantially More Significant Impact
4.13.2: Implementation of the Modified Project significantly conflict with program, plan, ordinance, or policy addressing roadways during operation assuming existing plus project.	S	4.13-1(a): <u>Castro Street and the I-580 WB Ramps/Chevron® Entrance (Intersection #1 - Existing Plus Project):</u> 1) Installation of a dual southbound left turn lane on Castro Street and 2) installation of a third NB through lane on Castro Street. 4.13-1(e): <u>Richmond Parkway and Goodrick Avenue (Intersection #29 – All Plus Project Scenarios):</u> Conversion of the EB exclusive right turn lane to a shared through-right lane.	SU	New Significant Impact
4.13.3: Implementation of the Modified Project significantly conflicts conflict with program, plan, ordinance, or policy addressing roadways during special events	S	4.13-3: Prior to issuance of occupancy permits, the Modified Project shall mitigate the above-identified impacts by paying the required traffic impact fees described below, subject to City approval. Payment of the Regional Transportation Development Impact Mitigation Fee: The Modified Project would pay the West County STMP development fees to fund regional freeway system improvements including I-580 improvements.	SU	New Significant Impact

4.13.4: Implementation of the Modified Project could potentially conflict operations: conflict with program, plan, ordinance, or policy addressing roadways during special events.	PS	<p>4.13-4: To ensure that the maximum additional peak hour traffic at the i-580 interchange with Stenmark Drive does not exceed 800 vehicles, any event with a potential attendance of 3,000 people or more be would be required to prepare a detailed traffic monitoring and management program, subject to city approval that could include the following measures.</p> <ul style="list-style-type: none"> Off-site parking with shuttle service Traffic control office deployment On-street parking restrictions Roadway closures Restricted access/bus priority streets Event signage including directional and/or detour signs Media announcements of potential traffic restrictions and shuttle service options Marketing campaign to encourage transit use and bicycle use to special events <p>Public information on events for commuters, businesses, and deliveries</p>	LTS	No New or Substantially More Significant Impact
4.13.5: Implementation of the Modified Project may potentially conflict with program, plan, ordinance, or policy addressing transit during operation.	LTS	Not mitigation is required.	NA	No New or Substantially More Significant Impact
4.13.6: Implementation of the Modified Project would not conflict with program, plan, ordinance or policy addressing bicycle, or pedestrian facilities during operation.	BI	No mitigation is required.	NA	No New or Substantially More Significant Impact
4.13.7: Implementation of the Modified Project would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).	LTS	No mitigation is required.	NA	No New or Substantially More Significant Impact
4.13.8: Implementation of the Modified Project would result in inadequate emergency access.	S	Implement Mitigation Measure 4.7-1 and 4.13-5 .	LTS	No New or Substantially More Significant Impact
4.13.9: Implementation of the Modified Project may significantly conflict with program, plan, ordinance or policy addressing roadways during	PS	<p>Implement Mitigation Measure 4.13-1(a) and 4.13-1(e):</p> <p>4.13-1(b): <u>Richmond Parkway and West Gertrude Avenue (Intersection #21 – Cumulative Plus Project): Conversion</u></p>	SU	New Significant Impact

operation assuming cumulative plus project conditions.		of the NB exclusive right turn lane to a shared through-right lane.		
		4.13-1(c): <u>Richmond Parkway and Parr Boulevard (Intersection #22 – Cumulative Plus Project):</u> Conversion of the NB and SB exclusive right turn lanes to shared through-right lanes.		
		4.13-1(d): <u>Richmond Parkway and San Pablo Avenue (Intersection #23 – Cumulative Plus Project):</u> Restriping of NB San Pablo Avenue from the Richmond Parkway to Crestwood Drive to provide three through lanes and an associated modification of the traffic signal at Kay Road to accommodate the detectors required for the additional NB through lane that would be added at this intersection.		
		4.13-2: Prior to issuance of occupancy permits, the Modified Project shall mitigate the above-identified impacts by paying the required traffic impact fees toward the improvements described below, subject to City approval.		
		Richmond Parkway and San Pablo Avenue (Intersection #23 – Cumulative Plus Project): Construction of the planned San Pablo Avenue interchange as set forth in the West County Action Plan. As a mitigation, the Modified Project would pay the West County Subregional Transportation Mitigation Program (STMP) Development Fees.		
4.13.10: Implementation of the Modified Project may significantly conflict with program, plan, ordinance or policy addressing cumulative freeway operations.	PS	Implement Mitigation Measure 4.13-3.	SU	New Significant Impact
4.13.11: Implementation of the Modified Project would not conflict with program, plan, ordinance, or policy addressing transit, bicycle, or pedestrian facilities during operation assuming cumulative plus project conditions.	LTS	No mitigation required.	NA	No New or Substantially More Significant Impact
4.13.12: The Modified Project would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) under cumulative plus project conditions.	LTS	No mitigation required.	NA	No New or Substantially More Significant Impact

4.13.13: The Modified Project would not result in inadequate emergency access under cumulative plus project conditions.	LTS	Implement Mitigation Measure 4.7-1.	NA	No New or Substantially More Significant Impact
4.14 Utilities				
4.14.1: Implementation of the Modified Project will require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.	LTS	No mitigation identified.	NA	No New or Substantially More Significant Impact
4.14.2: Implementation of the Modified Project will require or result in the relocation or construction of new or expanded wastewater treatment facilities, the construction or relocation of which could cause significant environmental effects	LTS	No mitigation required.	NA	No New or Substantially More Significant Impact
4.14.3: Implementation of the Modified Project will require or result in the relocation or construction of new or expanded stormwater drainage facilities, the construction or relocation of which could cause significant environmental effects.	LTS	No mitigation required.	NA	No New or Substantially More Significant Impact
4.14.4: Implementation of the Modified Project will require or result in the relocation or construction of new or expanded electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.	LTS	No mitigation is required.	NA	No New or Substantially More Significant Impact
4.14.5: Implementation of the Modified Project will have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.	LTS	No mitigation is required.	NA	No New or Substantially More Significant Impact
4.14.6: Implementation of the Modified Project will likely result in a determination by the wastewater treatment provider that serves or may serve the modified project, that it has adequate capacity to serve the projected demand of the modified project in addition to the existing commitments of the provider.	PS	Implement Mitigation Measure 4.8-3. 4.14-1: Winehaven Legacy, LLC shall apply to connect to the RMSD for conveyance and treatment of wastewater generated at the Project Site. Subsequent to approval of connection to RMSD and prior to issuance of occupancy permits, the Modified Project shall fully fund or implement the following upgrades to the conveyance system to provide adequate conveyance and treatment capacity for	LTS	No New or Substantially More Significant Impact

		the peak day wastewater generation rate of the Modified Project. Alternatively, if the City implements any of these improvement prior to issuance of occupancy permits for the Modified Project, the improvement would not be required to be implemented and the City may collect fair-share contributions from the Modified Project to support implementation.		
		(a) Upsizing of 530 linear feet of an existing 6-inch pipe to a 10-inch pipe;		
		(b) In-kind replacement or lining, as approved by the Public Works Director, of 432 lineal feet of an existing 36-inch pipe.		
4.14.7: Implementation of the Modified Project will not likely generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals; or fail to comply with federal, state, and local management and reduction statutes and regulations related to solid waste.	LTS	None identified.	NA	No New or Substantially More Significant Impact
4.14.8: Implementation of the Modified Project will not have likely have cumulative utilities impacts	LTS	Implement Mitigation Measure 4.14-1.	NA	No New or Substantially More Significant Impact
NOTE: BI – Beneficial impact LTS – Less than significant NA – Not applicable NI – No impact S – Significant SU – Significant and unavoidable PS – Potentially significant Source: AES, 2010				

SECTION 3.0

PROJECT DESCRIPTION

3.0 PROJECT DESCRIPTION

3.1 INTRODUCTION

This chapter describes the Point Molate Mixed-Use Development Project (Modified Project) evaluated in this Draft Subsequent Environmental Impact Report (SEIR). This section specifically describes the following characteristics of the Modified Project: location, general existing characteristics of the Point Molate Site (also referred to as “Project Site”), the project objectives, the proposed Project Site development plan, and various development characteristics. Also described are the potential permits and approvals anticipated to be required to implement the Modified Project.

3.2 PROJECT SITE DESCRIPTION

3.2.1 PROJECT LOCATION

The Project Site is owned by the City of Richmond (City) and is located on the San Pablo Peninsula within the City limits in Contra Costa County (County) (**Figures 3-1** and **3-2**). The Project Site is bounded by the San Francisco Bay (Bay) to the west, open space parcels to the north and south, and the Chevron®-Richmond Refinery to the east, with the 480-foot hillsides of Potrero Ridge separating the refinery from the Project Site. Approximately 136 acres of the approximately 412-acre Project Site are submerged in the Bay, leaving approximately 276 acres above water. The Project Site is approximately 1.5 miles north of Interstate 580 (I-580) and the Richmond-San Rafael Bridge, and has direct freeway access via Stenmark Drive, a City-owned roadway (**Figure 3-2**). The Assessor’s Parcel Number of the Project Site is 561-100-008.

3.2.2 FORMER AND EXISTING USES

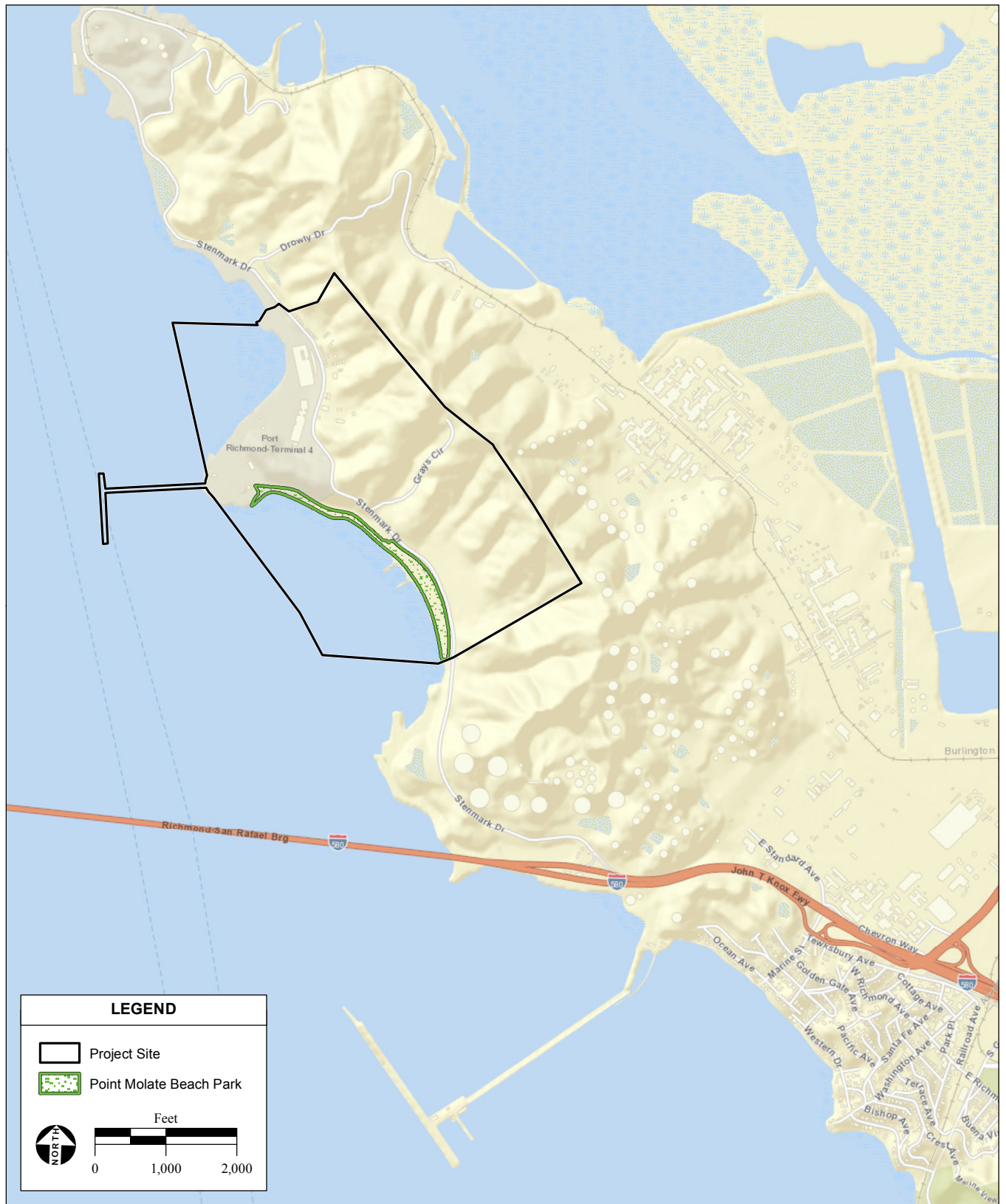
The Point Molate Site was used primarily for fishing, commercial, and naval activities in the 20th century. From around 1890 to 1912, a Chinese shrimp camp was established at Point Molate where Chinese shrimpers lived and worked. From 1907 to 1919, the historic Winehaven winery occupied the northern portion of the Point Molate Site. Beginning in 1942, the Point Molate Site served as a U.S. Navy (Navy) fuel storage and transfer facility. The Navy ceased operations on the Project Site on September 30, 1995, and in September 2003 transferred approximately 85 percent of the property to the City pursuant to the Base Realignment and Closure Act of 1990 (BRAC) process for use consistent with the City’s 1997 Point Molate Reuse Plan (Reuse Plan; City of Richmond, 1997; Appendix D of the Final Environmental Impact Report for the Point Molate Mixed-Use Tribal Destination Resort and Casino Project [2011 FEIR]). A 45-member Blue Ribbon Advisory Committee developed the Reuse Plan, which was approved by the Richmond City Council acting as the Local Reuse Authority, in 1997. The Reuse Plan serves as the guide for the reuse and development of the Project Site, and contemplated the development of the Point Molate Site with 670 residential units and preservation of approximately 70 percent of the land within the Point Molate Site as open space. In addition, the Reuse Plan envisioned that the Winehaven Historic District (Historic District), listed on the National Register of Historic Places (NRHP), would be generally preserved for adaptive reuse. **Section 4.4** and **Section 4.9** describe the historic buildings on the Point Molate Site in more detail, and **Figure 3-3** illustrates the locations of contributing components of the Historic District.



SOURCE: NatGeo, 2019; AES, 2019

Point Molate Mixed-Use Development SEIR / 216544 ■

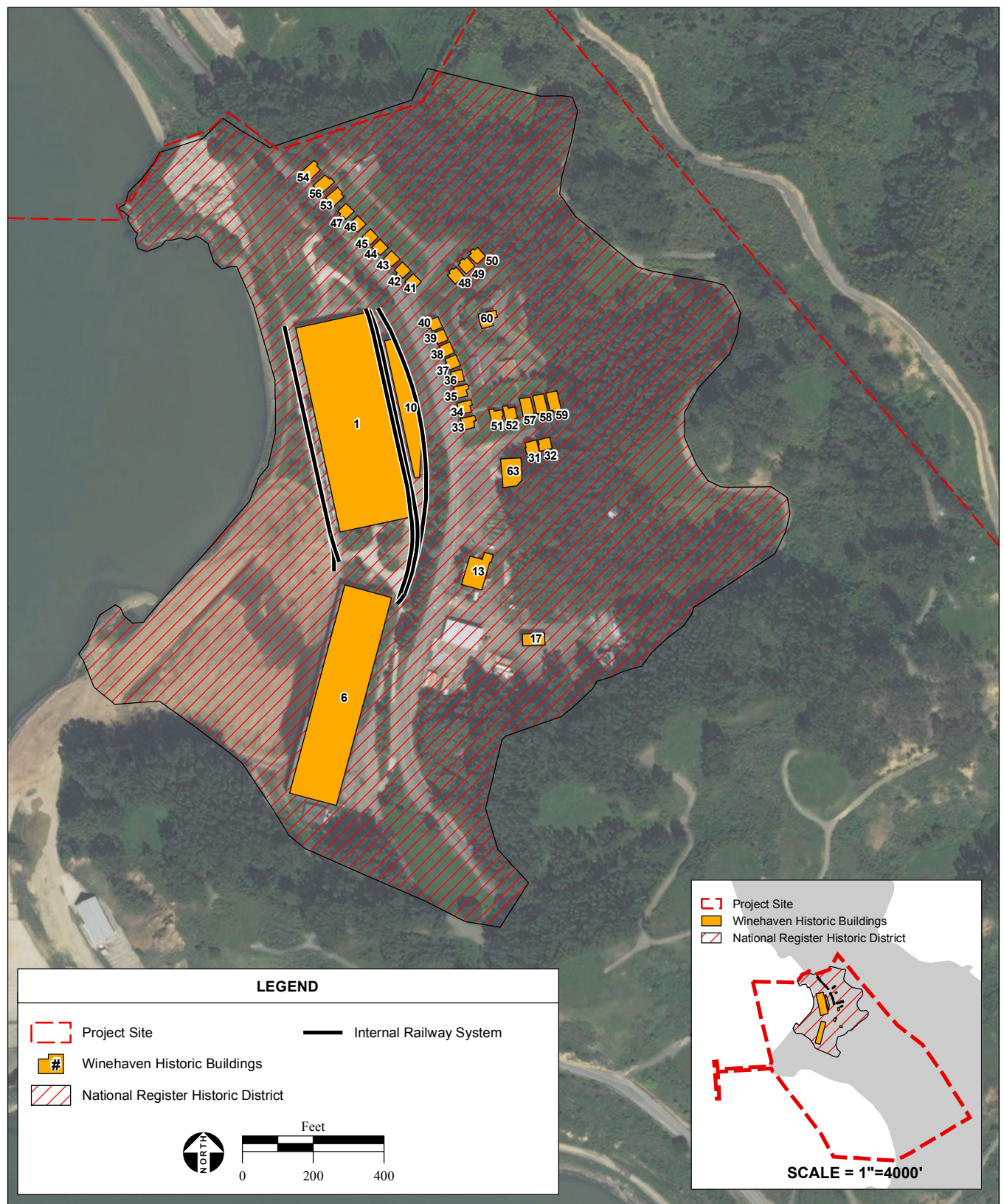
Figure 3-1
Regional Location



SOURCE: City of Richmond Online GIS Viewer, 2019; ESRI, 2019; AES, 12/12/2019

Point Molate Mixed-Use Development SEIR / 216544 ■

Figure 3-2
Site and Vicinity



SOURCE: DigitalGlobe aerial photograph, 8/31/2017; AES, 12/12/2019

Point Molate Mixed-Use Development SEIR / 216544 ■

Figure 3-3
Historic Buildings and Rails Contributing to the Winehaven Historic District

The final Finding of Suitability for Early Transfer (FOSET) and Early Transfer Cooperative Agreement (ETCA) were executed on September 8, 2008, and the transfer of the remaining land was completed in March 2010 per an ETCA, under which the Navy provided the City with funding for cleanup of the Project Site, using a cleanup plan agreed upon by the parties and the Regional Water Quality Control Board (RWQCB). The cleanup has been largely completed, but monitoring for potential pollutants continues. The hazardous materials cleanup is discussed in more detail in **Section 4.7**.

The Project Site is now in caretaker status, with maintenance of the remaining buildings and facilities undertaken by the City. Multiple small businesses currently hold licenses to utilize space on the Point Molate Site, but these licenses will be reevaluated for feasibility and may be terminated to allow development of the Modified Project. The City currently uses approximately 18 acres of the southwest portion of the Project Site for Point Molate Beach Park (see **Figure 3-2**). The park includes a paved parking area, picnic tables, portable toilets, and shoreline access. Public use is allowed at the Point Molate Beach Park during appropriate hours. The Modified Project would retain Point Molate Beach Park for public use.

3.2.3 EXISTING GENERAL PLAN AND ZONING

The City's General Plan 2030 (General Plan) establishes a broad vision, goals, and policies for urban design, while the Zoning Ordinance provides specific standards to regulate development.

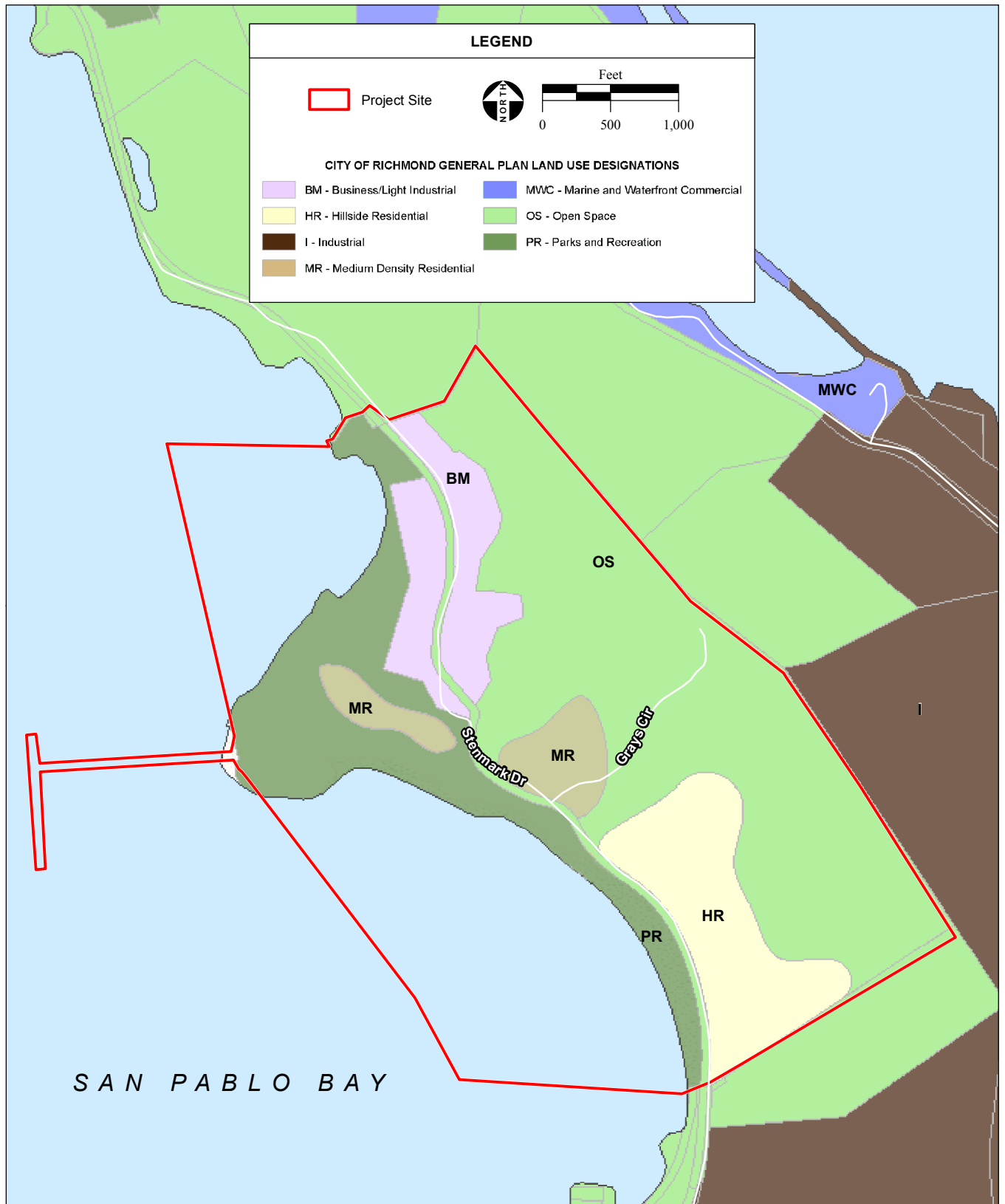
The General Plan was adopted in 2012 and provides a framework for sustainable growth and development in the City. The General Plan utilizes land use classifications to establish desired uses within specific areas of the City. **Figure 3-4** shows the existing General Plan Land Use designation for the Project Site, which consist of Business/Light Industrial, Open Space, Parks and Recreation, Hillside Residential, and Medium Density Residential. Additionally, the entirety of the Project Site is designated as a Change Area, which is an area that is largely underutilized with incompatible land uses or high potential for redevelopment.

The Point Molate Site is currently designated for multiple zoning districts, including: Single Family Hillside Residential (RH); Multifamily Residential (RM1); General Commercial (CG); Light Industrial (IL); Parks and Recreation (PR); and Open Space (OS). These zoning districts are shown in **Figure 3-5**. The Project Site is located within an Interim Study Overlay District that is described in detail in **Section 4.9.2.3**.

3.2.4 EXISTING SITE CHARACTERISTICS

3.2.4.1 Existing Historic Facilities

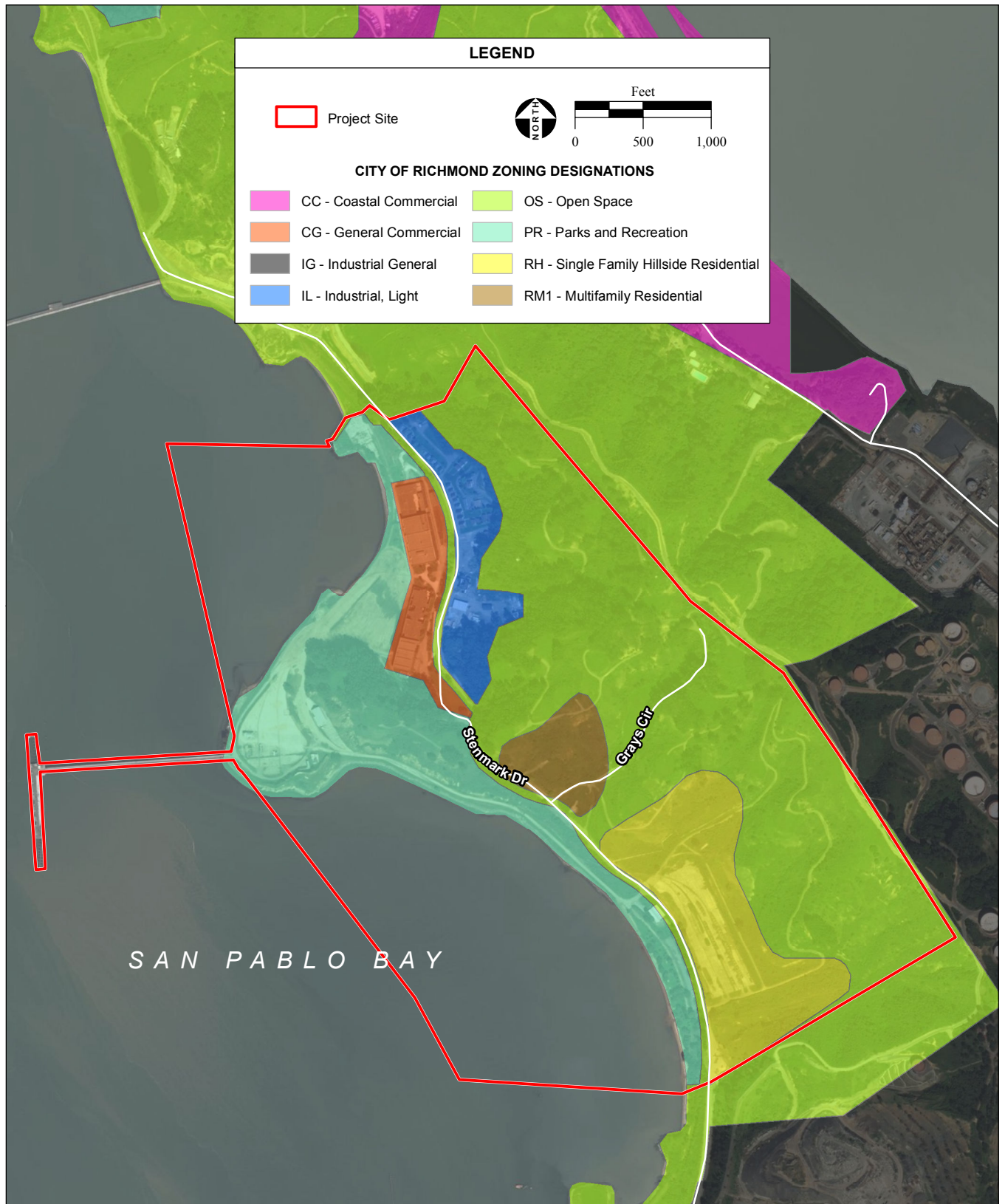
The Historic District was listed on the NRHP on October 2, 1978 for its significant role in early wine production in California. Constructed between 1907 and 1919, the Historic District includes 51 buildings and seven structures. At the time of the nomination, an over-large boundary defined the Historic District which encapsulated Winehaven structures as well as buildings associated with the World War II-era Naval Fuel Depot (NFD). An amendment to the NRHP nomination is being prepared by the City that, if accepted, would reduce the components of the Historic District to its 35 contributing buildings, including the two large wine cellar buildings, warehouses, worker cottages, workshops, the Winemaker's residence, and portions of the remaining internal railway system. The remaining 16 buildings and six



SOURCE: City of Richmond, 2018; DigitalGlobe aerial photograph, 8/31/2017; AES, 12/12/2019

Point Molate Mixed-Use Development SEIR / 216544 ■

Figure 3-4
City of Richmond General Plan Land Use Map for Project Site



SOURCE: City of Richmond, 2018; DigitalGlobe aerial photograph, 8/31/2017; AES, 10/14/2019

Point Molate Mixed-Use Development SEIR / 216544 ■

Figure 3-5
City of Richmond Zoning Map for Project Site

structures, including storage tanks, garages, a paint shop, pump houses, and recreation facilities will be reclassified as non-contributing elements as they were built for the NFD that occupied the Historic District beginning in 1942, after the period of significance. **Section 4.4** and **Section 4.9** describe the historic buildings on the Point Molate Site in more detail, and **Figure 3-3** illustrates the locations of contributing components of the Historic District.

3.2.4.2 Existing Utilities

Potable Water Supply

The East Bay Municipal Utilities District (EBMUD) provides potable water to the Project Site through a 12-inch diameter water main installed in 1997 along Western Drive. Water is pumped uphill to a storage tank, Tank A, and distributed onsite through private lines. The existing water distribution system is shown on Figure C.1 of **Appendix E**. Approximately 63 percent of the pipes are asbestos-cement pipes, approximately 27 percent are unprotected steel, and approximately 10 percent are cast iron or ductile iron pipe. The system is divided into four independent distribution systems. Two storage tanks, Tank A and Tank 66, provide fire protection and potable water. The locations of these existing facilities are shown on **Figure 3-6**. Tank A has a capacity of 1,134,000 gallons and Tank 66 has a capacity of 200,000 gallons. Tank A has a leak with an estimated loss of 15,000 gallons per day (gpd). There were originally 105 hydrants onsite; most of which are associated with the fuel tanks in the hillside/open space area. Most of the existing water distribution system is currently shut down, as there has been little demand for potable water since Navy operations ceased; it is maintained in caretaker status for fire suppression purposes. Groundwater has not been historically used on the Project Site as a potable water source; accordingly, there are no groundwater supply wells present.

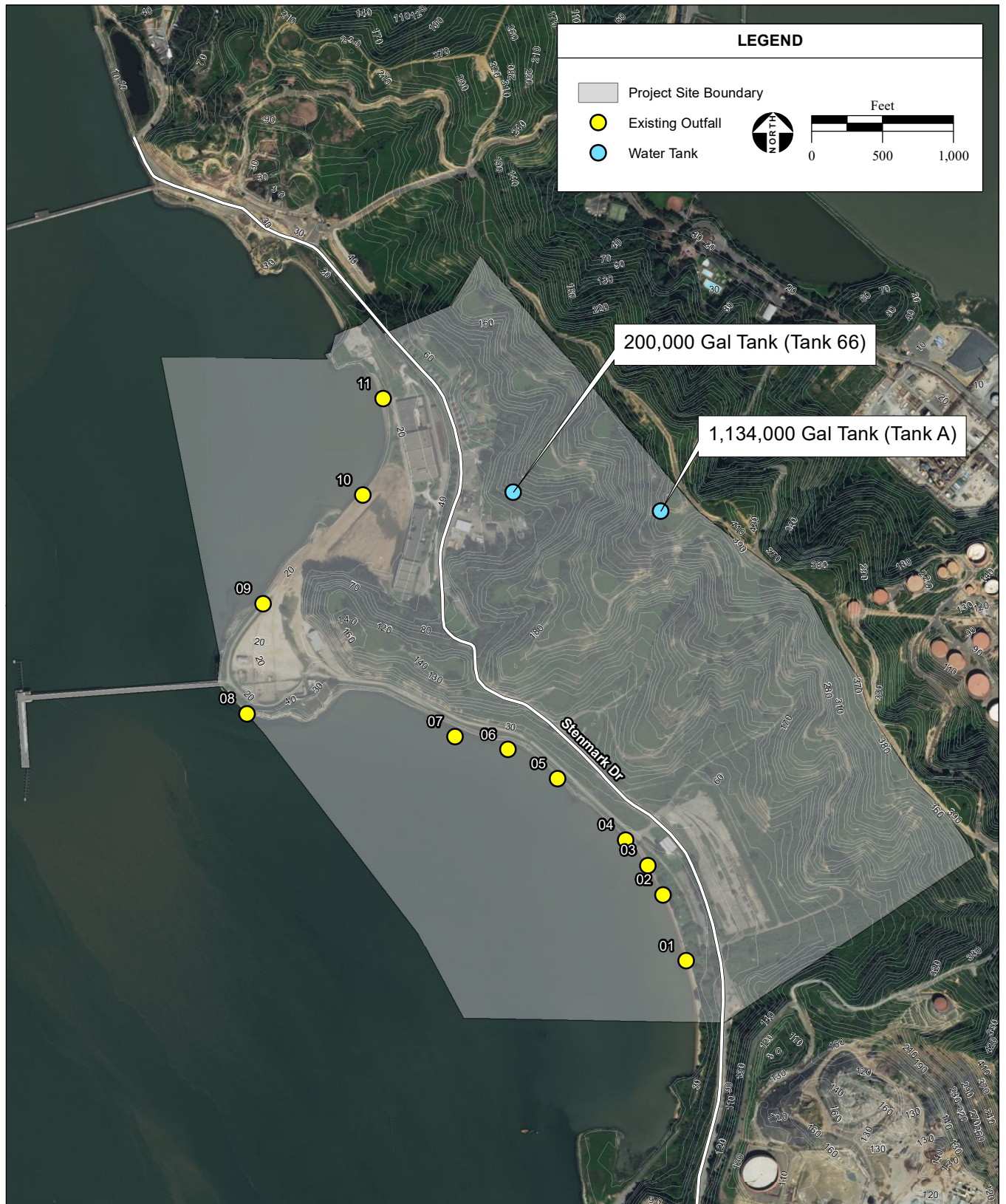
Stormwater

There are 12 distinct watersheds defined by the topography of the Project Site, varying in size from approximately 2.0 acres to 55.62 acres. These watersheds are shown in Figure 3 of **Appendix C**. Each watershed has a separate discharge point to the Bay. The eastern portion of each watershed is steeper upland where runoff flows over land into a system of natural channels and ravines. Drainage is diverted from the natural overland flows into culverts that discharge into the Bay. Precipitation that falls on impermeable surfaces, such as roads and parking lots, traverses down the slope as surface flow into stormwater management systems that discharge into the Bay.

Figure 3 of **Appendix C** depicts the existing storm drain system on the Project Site, which was designed to collect water through French drains and inlets in streets and landscaped areas. The drainage system was installed in the 1940s and upgraded in 1983. The system consists of French drains, six concrete catch basins, pipe inlet headwalls, and underground concrete culverts that convey stormwater to 11 outfalls to the Bay. The locations of the existing outfalls are shown on **Figure 3-6**.

Sanitary Sewer

The Project Site is within the 13.5-square mile service boundary of the Richmond Municipal Sewer District (RMSD), but is not currently connected to the RMSD wastewater collection system. RMSD, via an operations contract with Veolia Water North, operates a wastewater treatment plant (WWTP) located approximately 3 miles from the Project Site at 601 Canal Boulevard in Point Richmond.



SOURCE:BKF, 10/2019; DigitalGlobe aerial photograph, 8/31/2017; AES, 2/3/2020

Point Molate Mixed-Use Development SEIR / 216544 ■

Figure 3-6
Existing Onsite Water Infrastructure

Figure D.1 of **Appendix E** depicts the existing wastewater collection system on the Project Site. As shown therein, there are 4-, 6-, 8-, and 12--inch diameter sewers throughout the Project Site, that were plugged and capped at the manholes in 1995. There was an industrial WWTP and a sanitary sewer treatment plant at Navy Building No. 125, which had a design capacity of 24,000 gpd and a trickling filter capacity of 20,000 gpd. The treated wastewater from the WWTP was disposed of via a 10-inch diameter steel outfall to the Bay. In addition to Building 125, Building 127 utilized two large sand filters and a chlorination/dechlorination system. Just north of Building 127, three aeration ponds were constructed over a former sump pond that was used in the 1940s to contain contaminated fuels, tank bottom sludge, bunker fuel, leaking drums, and other liquid wastes. As part of the site remediation efforts, Building No. 125, Building No. 127, and the three aeration ponds were removed. Further, there were two septic tanks with leach fields at Navy Buildings No. 87 and No. 75. The aboveground equipment associated with the septic tank at former Building No. 75 has been removed, but the tank itself remains in place. There is currently a temporary sanitary trailer at Building No. 123 and the septic tank remains at Building No. 87. Portable toilets are used on the Project Site as needed. Sewage from the Project Site is trucked to the RMSD treatment plant.

3.2.4.3 Existing Site Access and Circulation

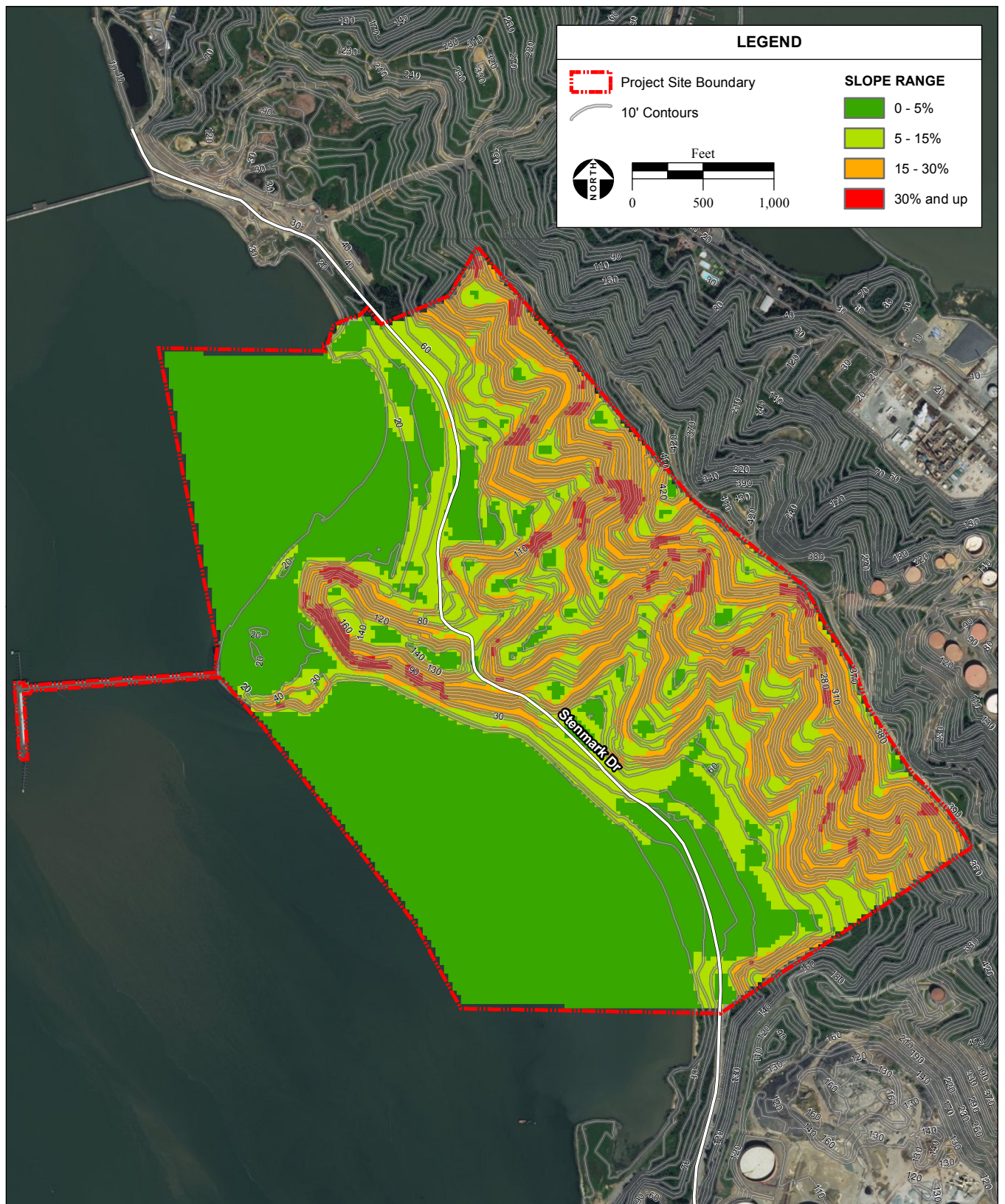
The Project Site is approximately 1.5 miles north of I-580 and the Richmond-San Rafael Bridge. Primary regional auto access to the Project Site is provided by I-580, via the Stenmark Drive exit. Existing traffic to the Project Site is minimal, as Stenmark Drive is not a through road and currently serves limited sites; public access to the Historic District is currently prohibited, but the public is allowed to use the Point Molate Beach Park during appropriate hours. The current alignment of Stenmark Drive through the Project Site is shown on **Figure 3-6**.

3.2.4.4 Natural Site Characteristics

The topography of the Project Site exhibits the characteristics of both the uplands in the coastal range and the tidal flats of the Bay. Elevations on the Project Site range from mean sea level along the western shoreline of the Project Site to approximately 350 feet above mean sea level along the crest of the Potrero Ridge that forms the eastern border of the Project Site. The slopes on the Project Site range from relatively flat within the open shoreline areas to approximately 46 percent along the steep hillsides of the Potrero Ridge (**Figure 3-7**).

The region's climate is heavily influenced by its coastal location. Terrestrial habitat types observed at the Project Site during surveys include: ruderal/developed, annual grassland, coastal scrub, invasive scrub, mixed riparian, eucalyptus woodland, and beach strand. Aquatic habitat types include: navigable waters¹, eelgrass bed, seasonal wetland, ephemeral drainage, and tidal marsh. The habitat types within the Project Site were determined to have potential to support 16 special-status plant species and 24 special-status animal species. For a detailed description of existing habitats, see **Section 4.3**, Biological Resources.

¹ Navigable waters are defined as the portion of the Project Site including the open waters of the Bay up to the extent of land influenced by the ebb and flow of the tide, consistent with the definition of Waters of the United States (33 CFR § 328.3(a)(1)). On the Project Site, this habitat type includes eelgrass beds present in the open waters and generally terminates along beach strand habitat.



SOURCE: Contra Costa County DEM, 2017; DigitalGlobe aerial photograph, 8/31/2017; AES, 10/15/2019

Point Molate Mixed-Use Development SEIR / 216544 ■

Figure 3-7
Slopes on Project Site

3.2.5 SURROUNDING LAND USE AND DEVELOPMENT

As delineated by the General Plan, the Project Site is located within the San Pablo Peninsula Area, west of Richmond Parkway. Richmond Parkway includes the San Pablo Peninsula and industrial areas west of Garrard Boulevard. Most of the peninsula is designated as open space or heavy industrial use.

Surrounding land uses include the following.

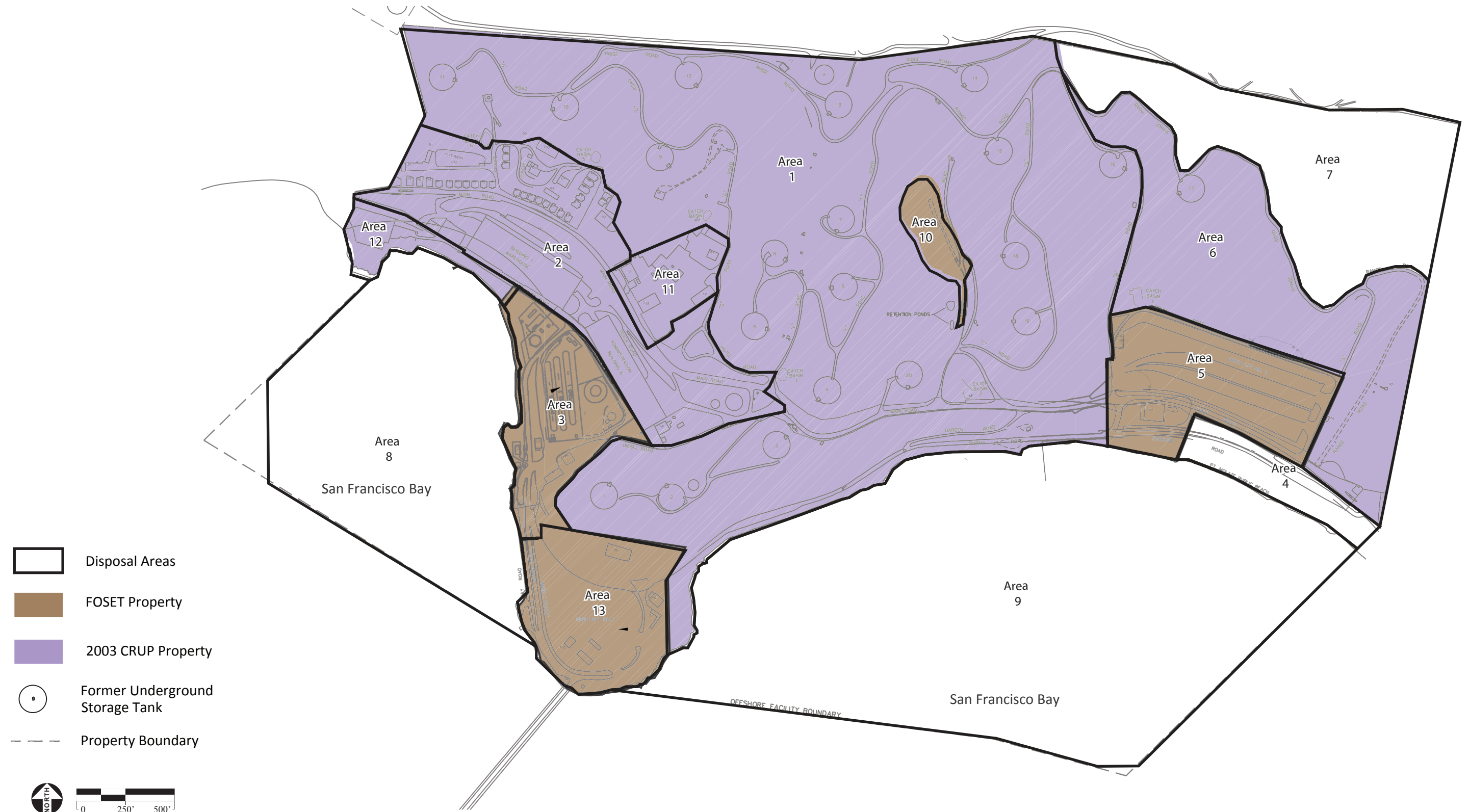
- The majority of the surrounding area is owned by Chevron® and is used for refining petroleum products. Chevron® property borders the Project Site on three sides and occupies approximately 2,900 acres. The main refinery is located approximately 1 mile southeast of the Project Site.
- South of the Project Site is the California Department of Transportation (Caltrans) maintenance facility and storage yard, which abuts the I-580 toll plaza for the Richmond-San Rafael Bridge.
- The Port of Richmond Terminal No. 4 is located at the tip of San Pablo Peninsula and consists of approximately 37 acres of cargo terminal that includes a 12,000 square foot (sq. ft.) warehouse. That property is currently owned and managed by the City.
- The Point San Pablo Yacht Harbor is located approximately 1 mile north of the Project Site and is privately owned. Land uses at the Point San Pablo Yacht Harbor consist of berths and a small restaurant (Point San Pablo Yacht Harbor, 2019).
- Point Richmond is a small residential neighborhood in the City located approximately 1.5 miles southeast of the Project Site on the south side of I-580. Point Richmond, located on a rolling hillside facing the Bay, is listed on the NRHP and is notable for its architecture. Some of the homes at the top of the hillside have views of the Chevron®-Richmond Refinery and I-580.

Potrero Ridge separates the Project Site from development to the east including the Chevron®-Richmond Refinery and Richmond; therefore, isolating the Project Site from industrial activities to the east. These surrounding land uses are described in detail in **Section 4.9, Land Use and Planning**.

3.2.6 DEED RESTRICTIONS

In 2003, the Navy executed a quitclaim deed for the transfer of a portion (approximately 85 percent) of the Point Molate Site to the City. The deed identifies a variety of restrictions regarding utility easements; asbestos and asbestos-containing materials (ACM); lead-based paint (LBP); Comprehensive Environmental Response, Compensation, and Liability Act notices and covenants; soil and groundwater management; residential use; and restrictions regarding on-site underground storage tanks (UST). That same year, the San Francisco RWQCB and the Navy signed a 2003 Covenant to Restrict the Use of Property (CRUP) regarding future development on the Project Site that further restricts development within Disposal Areas 1, 2, 6, 11, and 12 as seen in **Figure 3-8**. The remaining 40 acres of the federal facility were transferred to the City in 2010 on the basis of a FOSET. The FOSET placed restrictive uses on Disposal Areas 3, 5, 10, and 13 as seen in **Figure 3-8** (Appendix X of **2011 FEIR**).

A new CRUP was established in April 2010 between the City and the RWQCB to protect the public and the environment from the hazardous materials at the Point Molate Site during remediation activities and to afford the necessary access to complete those activities (Appendix C of **Appendix G**). In accordance with the 2010 CRUP, Disposal Areas 1, 2, 3, 5, 6, 10, 11, 12, and 13 (**Figure 3-8**) as defined in the FOSET and 2003 CRUP shall not be used for any of the following purposes until the RWQCB



makes the written determination that the necessary remedial actions have been completed or that the restrictions are no longer necessary to protect human health or the environment.

- A residence including any mobile home or factory-built housing constructed or installed for use as residential human habitation
- Hospitals for humans, schools for persons under 21 years of age, day care centers for children, or any permanently occupied human habitation

Furthermore, according to the 2010 CRUP, the following activities in or on the Point Molate Site shall not be conducted without written approval from the RWQCB.

- Removal and disposal of contaminated soil or groundwater unless in accordance with all applicable federal, state, and local regulations governing removal, transport, and disposal of hazardous substances and hazardous waste.
- Dewatering activities unless in accordance with a RWQCB-approved dewatering work plan.
- Disturbance nor use of the existing groundwater monitoring wells and other test wells without the prior written approval of the RWQCB.
- Disturbance nor excavation of soils greater than 24 inches below ground surface (bgs) for any purpose other than environmental investigation or remediation unless prior notice is given to, and approval is obtained from, the RWQCB to the extent, and in the manner, that such approval is required under an approved soil and groundwater management plan (SGWMP) applicable to the relevant area and the proposed excavation is implemented in a manner consistent with the requirements of that SGWMP; if the excavation is consistent with the requirements of the applicable SGWMP, and that plan does not require additional prior approval by the RWQCB, then no such approval is required for the specific excavation work. If the RWQCB has not approved a SGWMP applicable to the area, or if the proposed excavation is inconsistent with the requirements of the SGWMP, then RWQCB approval shall be obtained prior to disturbing any soils as described above.
- Installation of groundwater production wells nor use of the groundwater for residential, municipal, agricultural, or industrial uses without the written approval of the RWQCB.
- Use of nor access to USTs or property on or around the USTs located in Areas 1 and 6 for a distance of 150 feet from the perimeter of the UST for any reason in a manner that may disrupt the structural integrity of the USTs, unless a licensed structural engineer certifies that such use, in conjunction with any appropriate mitigation measures, would not adversely affect the structural integrity of the UST, and the local government entity that issues permits for the installation of USTs gives its prior approval for such use.
- Installation, placement, coverage, nor loading the top of any UST located in Areas 1 and 6 with any combination of structures, vehicles, or equipment, unless a licensed structural engineer certifies that such activity, in conjunction with any appropriate mitigation measures, would not adversely affect the structural integrity of the UST, and the local government entity that issues permits for the installation of USTs gives its prior approval to such activity. This restriction shall apply to all USTs.

- In Areas 1 and 6, removal of any UST, nor disturbance of the soil in preparation for removing a UST, unless in accordance with an RWQCB-approved work plan for such removal or disturbance.

For Disposal Area 10 (also known as Installation Restoration [IR] Site 1) in **Figure 3-8** and **Figure 3-9**, the 2010 CRUP places further activity restrictions to the ones listed above.

- Engaging in any activity which disturbs, breaches, or otherwise affects the integrity of the soil cover
- Extracting or using groundwater for any purpose other than monitoring, remediation, or construction dewatering

Additionally, the 2010 CRUP specifies the compliance with the requirements of the SGWMP Disposal, which was approved in 2012 by the RWQCB (Appendix D of **Appendix G**). The SGWMP allows for and describes protocols that must be followed in order to complete soil disturbance and building demolition activities at the Project Site. Examples of activities covered by the SGWMP include, but are not limited to, landscaping, installing and maintaining utilities, grading, trenching, installing deep foundations, drilling borings for subsurface exploration or monitoring well installation, demolishing buildings, and constructing subsurface structures. The SGWMP covers all portions of the Point Molate Site except IR Site 3 and IR Site 4 as these areas are currently undergoing site-specific remediation activities (**Appendix G**).

Since the implementation of the 2010 CRUP, the Project Site has undergone remediation activities, which are discussed in more detail in **Section 4.7.3.3**. Furthermore, as part of the Modified Project, the Point Molate Site will undergo future remediation activities. This is discussed in more detail in **Section 3.5.2**.

3.2.7 TIDELANDS TRUST/STATE LANDS

Part of the overall Project Site consists of tide or submerged tidelands, including lands subject to the public trust doctrine. Tide and submerged lands not granted to the City are held and administered by the California State Lands Commission for public trust purposes. The development area is not expected to result in any development of tide or submerged lands, and therefore the Modified Project is not expected to require approvals from the State Lands Commission. Further discussion of the tidelands trust is included in **Section 4.9**, and the State Lands Commission is identified as a trustee agency for the Modified Project.

3.3 PROJECT OBJECTIVES

Section 15124(b) of the California Environmental Quality Act (CEQA) Guidelines requires that “a statement of objectives sought by the proposed project” be provided and that it include the underlying purpose of the project. The project objectives statement under CEQA assists the Lead Agency in developing a reasonable range of alternatives and aids the decision makers in preparing their findings.

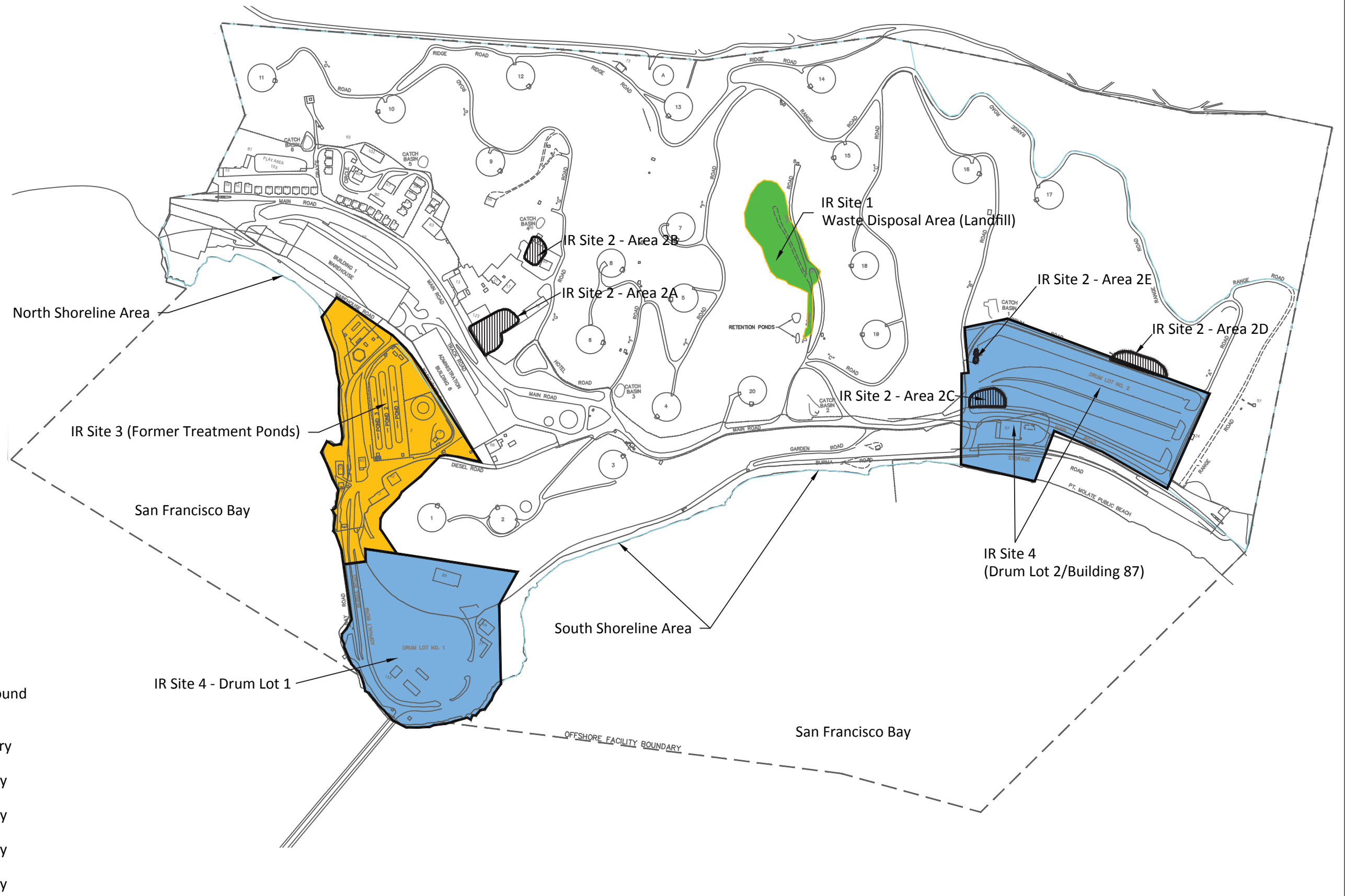


Figure 3-9
Installation Restoration (IR) Sites and Hillside Underground Storage Tanks (USTs)

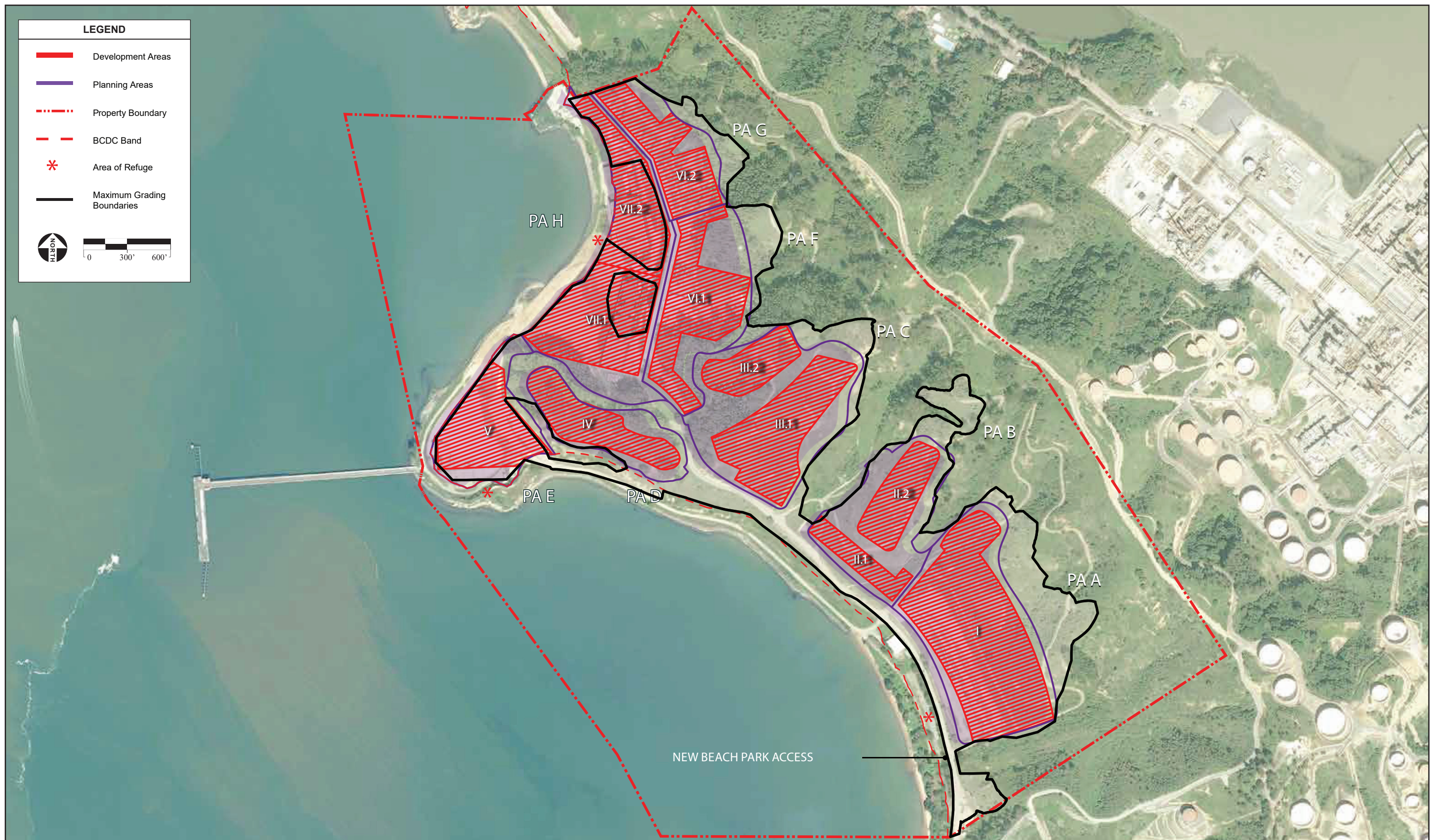
The project objectives for purposes of CEQA requirements are to:

- provide a project that is consistent with the BRAC approval and related conditions, as well as with the Navy Record of Decision for the transfer;
- provide a project that supports the vision of the 1997 Point Molate Base Reuse Plan;
- provide a variety of residential unit types to create a new residential neighborhood that serves a diverse population and helps to address the state and City's housing crisis;
- provide a mix of residential, retail, and restaurant uses that support each other and decrease trips compared to single-use developments;
- have a positive contribution to the local economy through new capital investment, the creation of new jobs, and the expansion of the tax base;
- balance economic development with retention and preservation of open space and the rehabilitation of historic buildings;
- provide open space that preserves sensitive habitat, minimize ridgeline disturbance, and provide opportunities for passive recreation;
- implement the portion of the San Francisco Bay Trail project along the frontage of the Project Site to increase shoreline recreational opportunities in the City;
- provide a mix of uses at a density sufficient to fund hazardous material remediation, substantial amounts of open space, and historic rehabilitation and adaptive reuse of the historic buildings in the Historic District;
- facilitate the early environmental cleanup and redevelopment and reuse of now vacant and underutilized land in an urban area;
- provide high-quality architecture that complements existing, historic structures and incorporates sustainable design practices into new buildings and landscaping; and
- provide high-quality, efficient infrastructure to serve the Modified Project.

3.4 MODIFIED PROJECT

3.4.1 OVERVIEW AND DEVELOPMENT PROGRAM

The Modified Project identifies eight Planning Areas within the Project Site, designated as Planning Areas A through H, as depicted in **Figure 3-10** and described in **Table 3-1**. The Planning Areas shown on **Figure 3-10** depict the outer limits of where development could occur. Potential developable areas within the Planning Areas (referred to as Development Areas) would be limited to no more than 30 percent of the total above-water Project Site area (approximately 82.74 acres) by the Modified Project's entitlements. **Figure 3-10** provides an example for how these Development Areas could be arranged within the Planning Areas to meet the limitations of development on the Project Site. **Figure 3-11** provides an example for how buildings could be arranged within the Development Areas. Grading for hillside stability would be conducted in the "Hillside Grading Areas" shown on **Figure 3-10**.





These Hillside Grading Areas outside the Planning Areas would be revegetated and be Open Space after construction. No habitable buildings would be located in the Hillside Grading Areas.

Planning Areas A through E are outside of the Historic District; Planning Areas F, G, and H are within the Historic District. Development within the Historic District would include rehabilitation and reuse of the existing historic buildings. The Modified Project proposes to rehabilitate all of the contributing buildings to the Historic District in accordance to the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings. **Figure 3-3** shows the historic buildings that would be rehabilitated by the Modified Project per the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings. Any structures located onsite that are not historic or contributing elements of the Historic District would be demolished.

The Planning Areas within the Project Site would be assigned General Plan land use designations that exist in the current General Plan as provided in **Table 3-1**, consisting of Medium Intensity Mixed-Use (MI-MU) and Low-Density Residential, and rezoned pursuant to a Planned Area Development Plan. The proposed land use designations for the Modified Project are illustrated in **Figure 3-12**. The Modified Project would amend the development standards related to the MI-MU designation to allow, with an approved Planned Area Development (PAD) permit, the following: residential and commercial-only development, low-rise development, and an increase in the height limit above 55 feet. In addition, the Modified Project would amend the MI-MU designation to increase the maximum permitted floor area ratio from 2 to 2.5 in the Winehaven District. The Modified Project also proposes to modify the text describing Change Area 13 to make it consistent with the Modified Project. The hillside open space will be assigned a General Plan land use designation of Open Space and the shoreline open space would be designated as Parks and Recreation.

The Modified Project proposes two development options. Both options have the following components:

- Up to 1,260 newly constructed residential units, comprised of the following unit types:
 - 274 Single Family Homes
 - 636 Low-Rise Apartments and Townhomes
 - 350 Mid-Rise Apartments and Condominiums
- Approximately 374,572 sq. ft. of rehabilitated existing, historic buildings²
- Approximately 250,000 square feet of new construction
- Approximately 10,000 square feet for an on-site joint fire and police substation and/or other community service uses
- The remainder of the Point Molate Site would remain as open space (approximately 193.06 acres), including recreational areas, parks, trails (including an approximately 1.5-mile portion of the San Francisco Bay Trail along the shoreline), vista overlooks, and other similar spaces that are open to the public.
- A 5,000 square foot terminal on the existing pier that would be accessible to water transit options, such as ferries, water shuttles, and/or water taxis

² Square footage of the existing historic buildings is derived from prior documentation and plans.

Under Option 1, the approximately 374,572 square feet of rehabilitated historic buildings would contain 20,000 square feet of retail/restaurant uses and 473 residential units. The approximately 250,000 square feet of new construction would contain 20,000 square feet of restaurant/retail uses and 307 residential units.

Under Option 2, the approximately 374,572 square feet of rehabilitated historic buildings would contain 20,000 square feet of retail/restaurant uses and 354,572 square feet of other commercial uses. The approximately 250,000 square feet of new construction would contain 20,000 square feet of restaurant/retail uses and 230,000 square feet of other commercial uses.

Under either option, units could be transferred between Planning Areas A through G, with a maximum change in any Planning Area of 20 percent. While units could be transferred, the total number of residential units must be as proposed by either Option 1 or Option 2.

The Modified Project includes the execution of a Disposition and Development Agreement (DDA) that would authorize the sale of the developable portions of the Point Molate Site to Winehaven Legacy LLC (the Applicant) and include other terms regarding the sale, transfer, and development of the site. This SEIR provides the environmental clearance for the DDA. The remaining areas of the Project Site would either continue to be owned and maintained by the City or the City could enter into an agreement for all or part of the open space to be owned and/or maintained by another party (i.e., East Bay Regional Parks District or a public land trust). One or more public financing mechanisms would be created for the Modified Project to provide financing of public improvements and services.

3.4.2 RECREATION AND OPEN SPACE USES

The hillside land in the northeastern portion of the Project Site would be maintained as open space. Open space areas would be maintained primarily in their natural state, but would include pedestrian trails, picnic areas, restroom facilities, and park amenities consistent with those found in regional parks in Alameda and Contra Costa counties. The restroom facilities would be designed to blend in with the natural environment.

A shoreline park would provide public access to the Bay along the entire shoreline of the Project Site. The shoreline park would include large vegetated areas for walking and enjoying the shoreline, a vista overlook, picnic areas (both open and reserved), park recreation facilities, a paddle sport launch area, interpretive center, and restrooms facilities. The shoreline park also could include a place for public art and cultural exhibits. Additionally, the Modified Project would implement the development of an approximately 1.5-mile segment of the San Francisco Bay Trail previously approved by the City (see **Section 3.4.3.3**). This segment of the Bay Trail would be in the shoreline park,

Interspersed within the residential development areas, neighborhood parks would be constructed as part of the Modified Project. These neighborhood parks would be part of the total open space acreage on the Project Site and include recreational amenities, such as picnic tables and playgrounds. These neighborhood parks would be open to the public and fully accessible.

TABLE 3-1
MODIFIED PROJECT

Planning Areas	Development Areas	Proposed General Plan Land Use Designation	Proposed Uses under the Modified Project	Option 1	Option 2
A, B	I, II	Medium-Intensity Mixed-Use (Community Nodes and Gateways) and Low Density Residential	Includes mixed-use development with neighborhood and park-serving commercial uses encouraged along Stenmark Drive. Residential-only development is allowed, including condominiums, detached homes, townhouses, and apartments. Commercial-only development is not allowed. Minimal setbacks and parking located to the sides or rear of buildings is encouraged.	416 residential units: <ul style="list-style-type: none"> • 90 single family homes • 176 townhomes • 150 multi-family units 	416 residential units: <ul style="list-style-type: none"> • 90 single family homes • 176 townhomes • 150 multi-family units
C	III	Medium-Intensity Mixed-Use (Community Nodes and Gateways) and Low Density Residential	Includes single and multi-family housing types, including apartments, bungalows, cottages, townhouses, stacked flats, and condominiums. Neighborhood mixed-use development is allowed.	199 residential units <ul style="list-style-type: none"> • 129 single family homes • 70 multi-family homes 	199 residential units <ul style="list-style-type: none"> • 129 single family homes • 70 multi-family homes
D	IV	Low Density Residential	Includes detached single-family residential development in level to moderately sloped areas. Also intended for public trail access and public overlooks.	35 residential units, all single family homes	35 residential units, all single family homes
E	V	Medium-Intensity Mixed-Use (Community Nodes and Gateways)	Includes mixed-use development with retail and food-service uses, including restaurants and cafes, encouraged at street-level along public rights-of-way and at waterfront open space. Residential uses typically would consist of higher-density development, including condominiums, townhouses, and apartments. Commercial uses can include small to large-scale retail and office, and other commercial uses compatible with residential development.	270 residential units, all multi-family units	270 residential units, all multi-family units

			New development is encouraged to have minimal setbacks and parking located to the sides or rear of buildings preferred.		
F, G, H	VI, VII	Medium-Intensity Mixed-Use (Community Nodes and Gateways)	<p>Includes mixed-use development with commercial and office/light industrial uses encouraged at street-level along corridors and/or open space. This classification also allows residential-only or commercial-only development.</p> <p>New development should be sensitive to designated historic buildings.</p> <p>All types of residential uses are compatible with this designation.</p> <p>Commercial uses may include small to large-scale retail, entertainment, institutional, restaurant, office, and other similar uses.</p> <p>New development is encouraged to have minimal setbacks and parking located to the sides or rear of buildings preferred.</p>	<p>1,120 residential units</p> <ul style="list-style-type: none"> 1,100 multi-family units 20 single-family homes <p>40,000 square feet retail/restaurant</p>	<p>340 residential units</p> <ul style="list-style-type: none"> 320 multi-family units 20 single-family homes <p>40,000 square feet retail/restaurant</p> <p>584,572 square feet commercial</p>

Land Use - General Plan Designations

- Low-Density Residential
- Medium-Intensity Mixed-Use
- Parks & Recreation
- Open Space
- Winehaven Historic District Boundary
- Property Boundary
- Area of Refuge

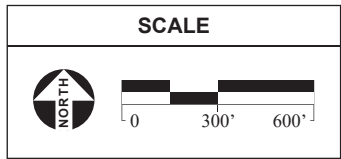


Figure 3-12
Land Use – Proposed General Plan Designations

3.4.3 VEHICLE ACCESS, CIRCULATION, AND PARKING

3.4.3.1 Site Access (Stenmark Drive)

The Modified Project would be accessed by Stenmark Drive, which is the only access road that serves the Point San Pablo and Point Molate areas. Due to anticipated increases in traffic, the Modified Project proposes to widen Stenmark Drive to accommodate 11- to 13-foot vehicle travel lanes, bicycle facilities/multi-use path, planter strips for street trees and verge plantings, and pedestrian sidewalks. The type of bicycle facilities along Stenmark are based on the adjacent uses, available right-of-way (ROW), safety, and other concerns. Bicycle facilities may include a 10-12 foot multi-use path (Class I) separated by a planter strip that is accessible to emergency vehicles; 5-foot wide bike lanes in the travelway travelling in each direction (Class II), or where constrained by a narrow ROW, shared vehicular/bike travel lanes (Class III).

Additionally, Stenmark Drive would be widened to accommodate two southbound lanes from 500 feet north of the Dutra Materials Road intersection to the I-580 ramps. **Figure 3-13** provides an illustration of the proposed improvements to Stenmark Drive. The Modified Project also proposes the installation of a traffic signal at Dutra Materials Road to address potential queuing issues and to provide a controlled pedestrian crossing for the San Francisco Bay Trail. While the majority of the widening of Stenmark Drive would be developed within the existing ROW, these improvements would require additional ROW be acquired from the adjacent land owner on Stenmark Drive. **Figure 3-14** shows the approximate locations of the ROW expansions to accommodate the proposed road widening. Undergrounding or relocating existing utility power poles along Stenmark Drive from the easterly boundary to freeway connection (I-580) would occur to accommodate completion of the anticipated improvements to Stenmark Drive.

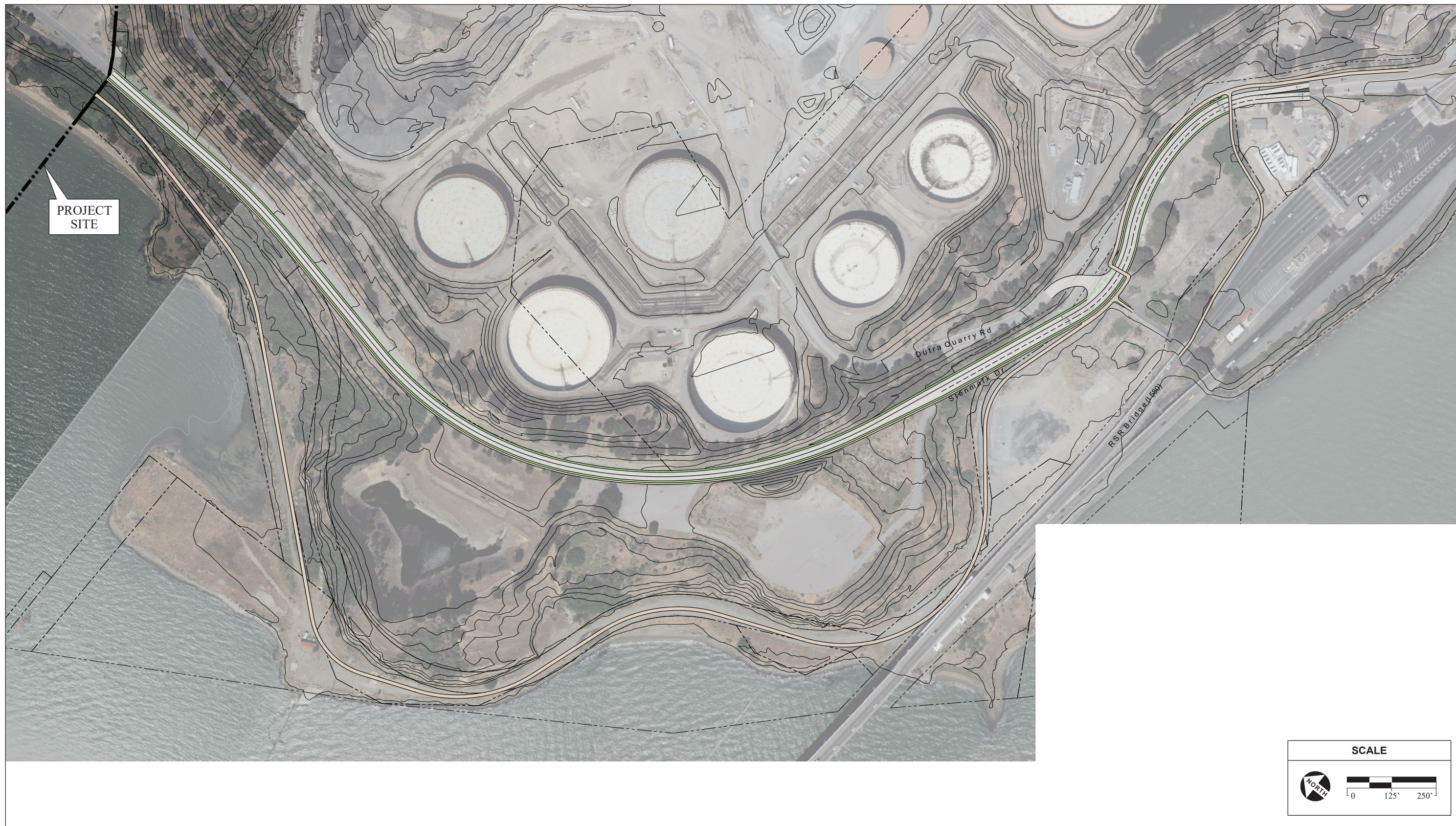
3.4.3.2 Internal Circulation and Parking

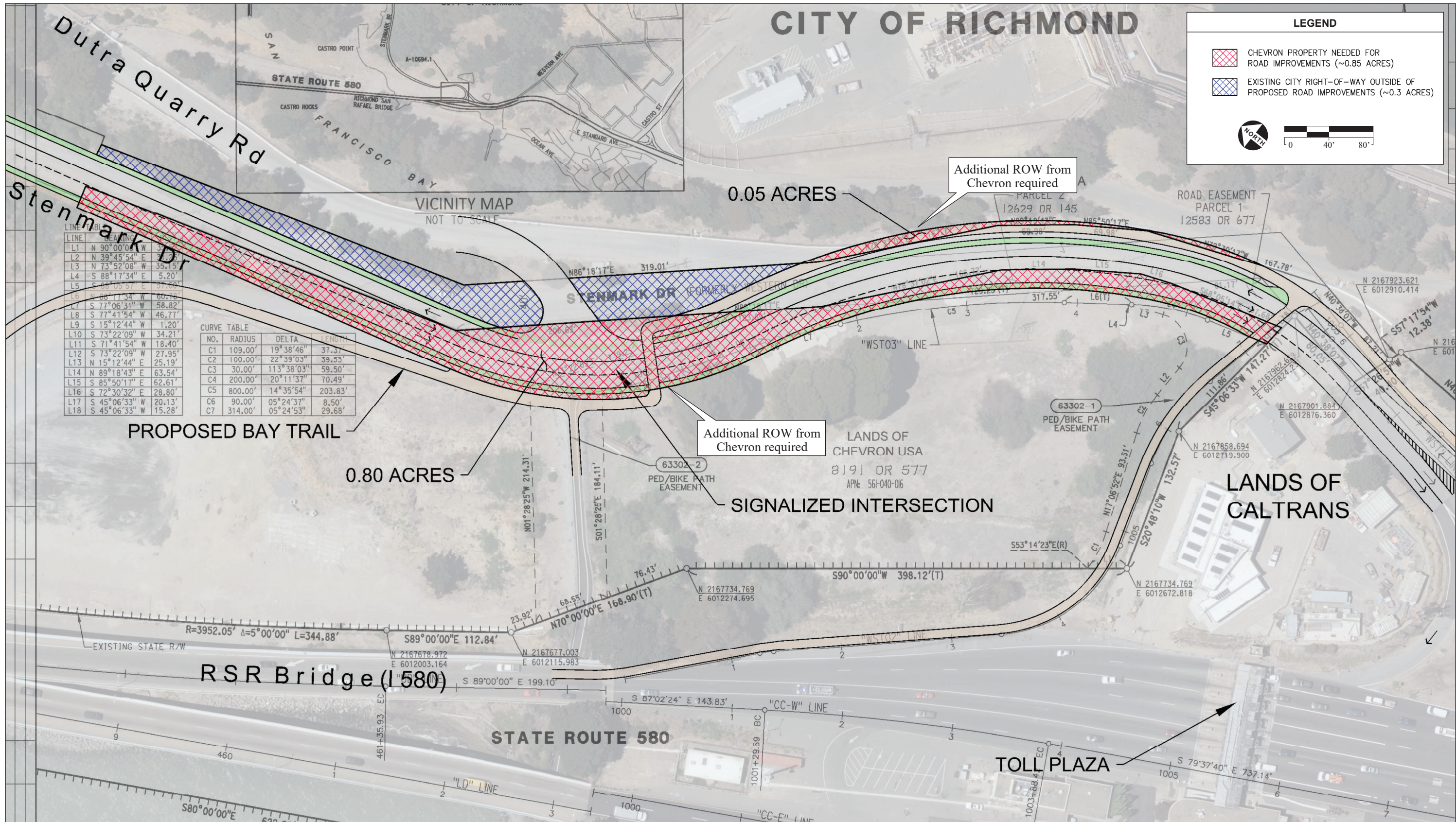
Stenmark Drive would continue to be the main road through the Project Site. Under the Modified Project, the widening of Stenmark Drive described above would be continued through the Project Site. Access to the Planning Areas would be provided by secondary and tertiary streets branching off Stenmark Drive as shown on **Figure 3-15**. Access to the beach park would be provided via a new single driveway directly off of Stenmark Drive near the southern boundary of the Project Site. Roadways within the Planning Areas would range between approximately 34 feet and 36 feet wide to accommodate emergency vehicles and some street parking, where practical. Parking would be developed consistent with Ordinance No. 30-18 N.S of the Richmond Municipal Code.

3.4.3.3 Pedestrian and Bike Facilities

San Francisco Bay Trail

The San Francisco Bay Trail is a planned 500-mile regional pedestrian and bike trail around the perimeter of San Francisco and San Pablo Bays. The plan for the trail was prepared by the Association of Bay Area Governments pursuant to Senate Bill 100. While much of the trail is built and operational, the 1.5-mile segment of the San Francisco Bay Trail that will traverse the shoreline of the Point Molate Site is slated for development in the coming years. The shoreline park will include the newly constructed segment of the San Francisco Bay Trail analyzed in the 2018 IS/MND. The San Francisco Bay Trail will be situated along the western margin of the Project Site, providing unobstructed views of the Bay. The San Francisco





Bay Trail will provide bicycle and pedestrian access from I-580 to Stenmark Drive and around San Pablo Point to the San Pablo Yacht Harbor. A preliminary layout of the Bay Trail is illustrated on **Figure 3-15**. The environmental consequences of a 2.5-mile portion of the San Francisco Bay Trail adjacent to the former Richmond Belt Railway corridor (**Figure 3-3**) were analyzed in the 2018 *San Francisco Bay Trail at Point Molate* Draft Initial Study/Mitigated Negative Declaration prepared by the East Bay Regional Park District, which is incorporated by reference as described in **Section 1.4.4**. The Modified Project has agreed to undertake the development of 1.5 miles of this 2.5-mile portion of the Bay Trail. The project-level impacts of the development of the 1.5-mile portion of the San Francisco Bay Trail within the Project Site are summarized in each chapter and included as part of the cumulative analysis of the Modified Project in this SEIR.

Additional Facilities

As described above, the Modified Project includes widening Stenmark Drive, that will accommodate bicycle lanes, including appropriate signage and striping, as well as a sidewalk paralleling the western alignment of Stenmark Drive. In addition to providing for safe bicycle and pedestrian access to the Project Site to help reduce auto use, the bicycle lanes and sidewalks would provide an important connection from the Project Site to the San Francisco Bay Trail.

As described above, pedestrian trails would be provided throughout the Project Site, including within the hillside open space and shoreline park areas to connect the various Planning Areas and amenities. A preliminary layout of pedestrian trails is illustrated on **Figure 3-15**.

3.4.3.4 Transportation Demand Management Program

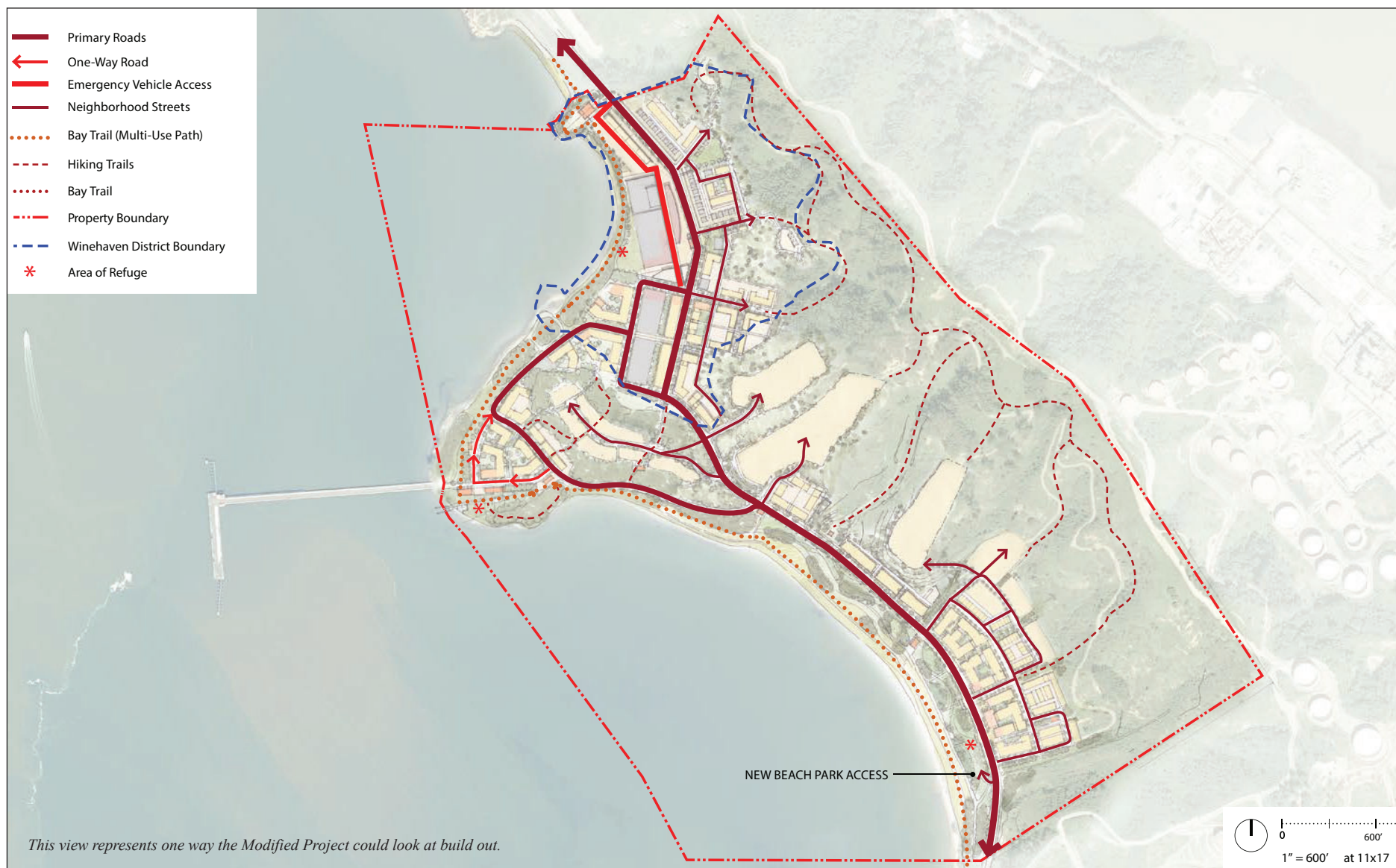
The following Transportation Demand Management strategies are included as part of the Modified Project to reduce total vehicle miles traveled (VMT) of residents and visitors to the Point Molate Site.

- **Bicycle Parking** – Free covered and secure bicycle parking facilities would be provided onsite for bicycle commuters within seventy-five feet of a building entrance in at least nine locations. Secure short-term bicycle parking would be located within fifty feet of the main entrances to each commercial building.
- **Changing Rooms with Showers for Bicyclists** – Under Option 2, two of the commercial buildings will also include changing rooms with showers for employees using alternative transportation.

Additionally, the Modified Project would obtain GreenTRIP Certification from TransForm, per RMC § 15.04.612, to ensure adequate VMT reductions are achieved. Other TDM measures are included as project mitigation, as discussed in **Section 4.13**.

3.4.4 PIER REUSE

The existing fuel pier and the associated water transit terminal would be retrofitted for passenger use. Retrofitting of the pier and utilization for watercraft would require a lease agreement from the California State Lands Commission. Approximately 100 parking spaces would be provided near the pier to serve the watercraft terminal. This parking lot also would be used as a refuge area during an emergency.



3.4.4.1 Pier Reconfiguration

The pier may be reconfigured to provide a better berthing area for ferries/water taxis by eliminating a portion of the southernmost end of the “T,” and adding square footage in an equal or lesser amount to what would be eliminated in other sections of the pier. **Figure 3-16** presents a conceptual plan-view of the reconfigured pier. Reconfiguration of the pier would not increase the square footage of water area covered by the pier. Reconfiguration would not require reinstallation and replacement of pilings, but would require some structural and cosmetic work.

3.4.4.2 Pier Improvements

The Modified Project would improve the pier by installing utility lines along the underside of the decking and covering of the pedestrian walkway similar to that found at other ferry stops along the Bay, among other upgrades. Pier improvements also would include covering and/or removal of now-abandoned pipelines on the sides of the existing pier, and installing new railings. The height of new construction on the pier would be limited to heights less than or equal to the existing buildings on the pier to ensure the new construction does not affect visibility on the Bay.

3.4.4.3 Pier-Related Facilities

Pier-related facilities would include docking facilities for ferries/water taxis and the renovation of an existing 5,000 square-foot building which could include offices, a passenger waiting area, small food service areas, and small retail areas. Watercraft associated with passenger service would dock along both sides of the western terminus of the pier. No dredging is proposed for use of the pier by ferries/water taxis as there is sufficient natural water depth to accommodate their use.

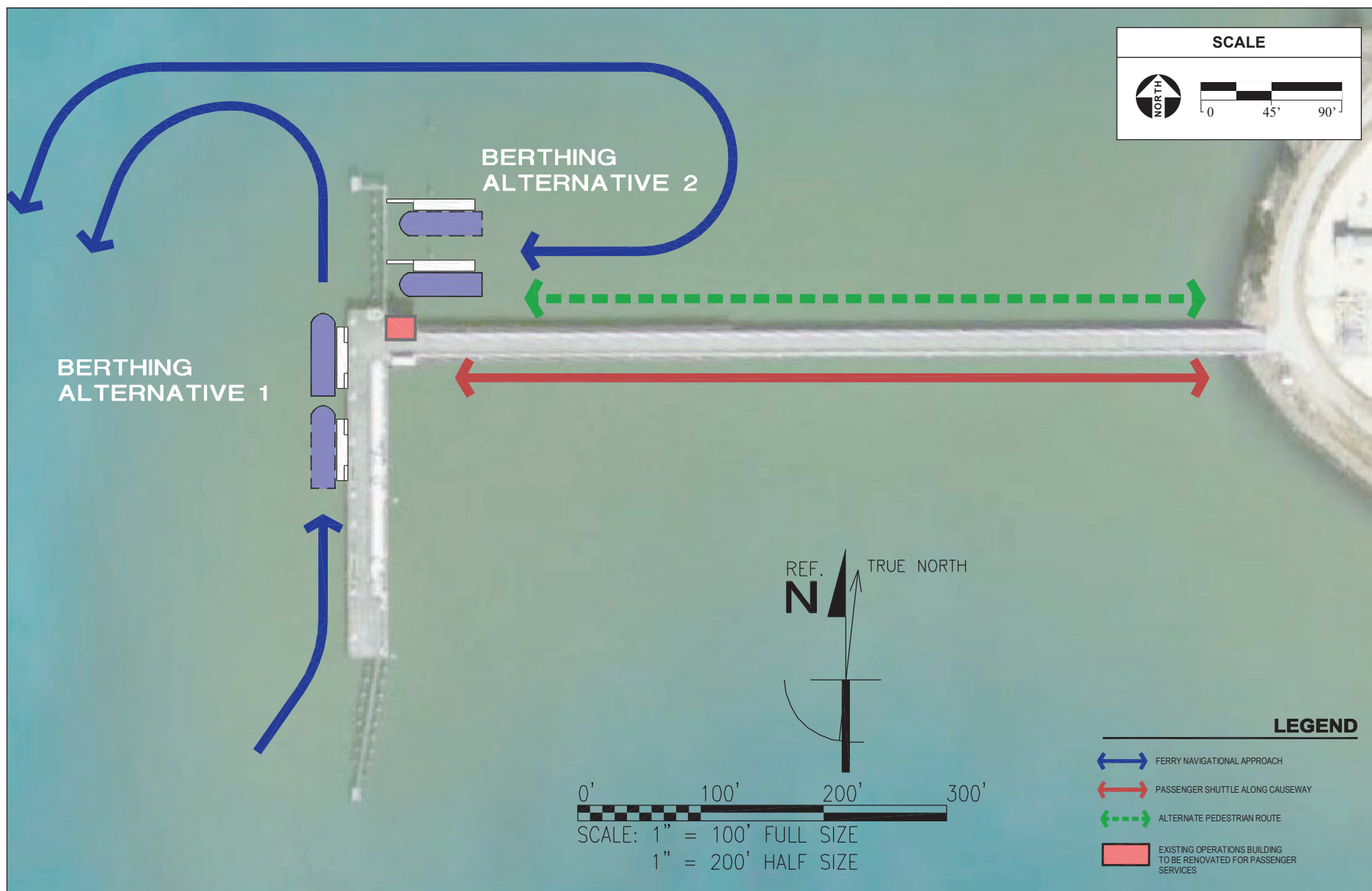
3.4.4.4 Public Walkways and Shuttle Service

A covered, public walkway with seating areas would be provided to allow pedestrian use from the shoreline to the western end of the existing pier. It is expected that most passengers would walk to the shore, but small electric golf carts would be provided for those who need assistance.

3.4.5 EMERGENCY FACILITIES

The City Fire Department and the City Police Department would provide fire protection, emergency medical services, and police services to the Project Site. The Modified Project would include a 10,000-sq. ft. on-site joint fire and police substation, to be operated by the City. The fire station would be sufficiently sized to house all necessary fire apparatus and equipment needed for the emergency response needs of the Modified Project. In an emergency, the pier could be used to provide emergency access to the Project Site via the Richmond Fire Department’s fire boat. As described above for water transit services, the emergency fire boat would dock at the end of the pier.

Several “shelter-in-place” areas would be designated within the Project Site to provide a safe location during emergencies to provide shelter and, if needed, provide staging areas for evacuation of the Project Site. Shelter-in-Place areas would be included in Planning Areas E and H, as well as the existing Point Molate Beach Park located west of Planning Area A.



3.4.6 UTILITIES AND SERVICE SYSTEMS

3.4.6.1 Water Supply

The estimated average daily water demand for the Modified Project would be up to approximately 0.37 million gallons per day (mgd) (0.29 mgd indoor; 0.08 mgd outdoor; **Appendix E**)³. Existing buildings that would be rehabilitated and new buildings would include automatic fire sprinkler systems, where required. Fire suppression and alarm systems for all buildings would be designed and installed in accordance with National Fire Protection Association Code §§ 13, 14, and 72, in addition to applicable federal, state, and local fire codes. Fire flow for all development areas would be provided by outdoor fire hydrants at the spacing required by the City Fire Marshal. Fire flow requirements for the land uses within the Project Site are anticipated to range between 1,500 gallons per minute (gpm) for 2 hours (residential) to 4,000 gpm for 4 hours (commercial).

As described in detail within the Water/Wastewater Master Plan included as **Appendix E**, the Modified Project would require the installation of new service connections for the proposed redevelopment from the existing/proposed potable water mains in Stenmark Drive owned and operated by EBMUD within the public ROW. The Modified Project's water system would consist of water mains, laterals, hydrants, meters, backflow valves, and pressure reducing valves. The potable water system would be designed and constructed in accordance with the City and Fire Department Standard Plans and Specifications and to applicable federal, state, and local codes and standards unless otherwise permitted. The existing water supply system is primarily made up of asbestos-cement pipe and is known to have water quality problems; therefore, EBMUD will require all of the existing system to be replaced with the new system. Water facilities would be located within the public ROW wherever feasible to allow for access and maintenance of facilities unless otherwise approved. Dedicated easements for water facilities on private property accessible to City personnel, fire trucks, and equipment for maintenance, repair, and servicing would be approved.

The pressure available from EBMUD's 12-inch line is inadequate to provide the required fire flow of 1,500 gpm at 20 pounds per square inch. As such, water storage facilities are needed to supply fire flow for the Modified Project. The capacity of the water storage facilities must be at least 1 mgd to provide fire flow for the required duration. EBMUD standards requires that two twin tanks, each with a volume of 0.5 mgd, be constructed. The twin tanks will require roughly 1 acre of land. A new booster pump will supply water to the new tanks and will require roughly 0.5 acres of land. The analyses show that 8-inch and 12-inch pipe sizes are needed to serve the fire flow from the new tanks. EBMUD would own the major facilities properties in fee. While final size and siting of the facilities will be determined at the design phase of the Modified Project, a preliminary layout is included in **Appendix E** and shown on **Figure 3-17**. EBMUD would require an 8-foot black vinyl coated security chain link fence topped with barbed wire around the perimeter of the EBMUD property that contains the twin tanks. The color of the twin tanks would be consistent with EBMUD's standard green color, Federal Color Number FS-14159.

³ Water demand was conservatively estimated based on Option 1 as residential uses have a higher water demand than commercial uses.

3.4.6.2 Wastewater

The estimated average daily wastewater generation for the Modified Project would be up to approximately 0.28 mgd (approximately 95 percent of the indoor water demand; **Appendix E**)⁴.

As described in detail within the Water/Wastewater Master Plan included as **Appendix E**, the Modified Project would abandon the portions of the existing wastewater collections system that would not be used and a new collection system, including sewer lines, force mains, and lift stations, would be installed in areas that are not currently served by the existing system. The facilities that would likely need to be abandoned include, but may not be limited to, the former on-site treatment plant, holding tank, associated lift/pump stations, septic tanks, leach fields, and any collection piping in conflict with the proposed development layout in the Planning Areas G and H. All new collection system piping and lift stations would be designed and constructed in accordance with the RMSD Standard Plans and Specifications. The number and size of lift stations that would be installed would depend on which of the two wastewater treatment options, described below, is selected.

Wastewater Treatment Variant A – On-Site Wastewater Treatment Facility

Under Wastewater Treatment Variant A, the Applicant would install and operate a package tertiary WWTP onsite that has the capacity to treat all of the wastewater generated by the Modified Project. The on-site WWTP would be constructed in phases of 0.25 or 0.5 mgd increments and would ultimately be built out to a capacity of 1 mgd. The WWTP would be capable of treating wastewater generated onsite to Title 22 tertiary disinfected recycled water standards and would produce enough recycled water to satisfy 100 percent of the estimated maximum recycled water demands of the Modified Project. Ten underground storage tanks would provide a total of 500,000 gallons of influent wastewater storage prior to treatment, and 30 underground storage tanks would provide a total of 1.5 million gallons of treated effluent storage. Treated effluent would be distributed throughout the Project Site via a network of smaller pipelines for use onsite. Tertiary effluent that is not used onsite for irrigation purposes would be conveyed via a new pipeline and booster pump station to the recycled water system within the Chevron®-Richmond Refinery, and subsequently used within the cooling towers and boilers at the Chevron®-Richmond Refinery (EBMUD, 2019c). The WWTP, 40 underground storage tanks, and the booster pump would all be sited together on approximately 2 acres near the southern entrance of the Project Site. The treatment facility would be approximately 15 feet tall, and be screened by fencing, trees, and shrubs. The storage tanks would be buried below grade, with approximately 5 feet of cover, in the sloped area adjacent to the treatment facility. The area over the underground tanks would be graded at 2:1 for slope stability; and landscaped with vegetative groundcovers for ease of maintenance and repairs of the tanks. A cross-sectional view of the proposed WWTP is included as **Figure 3-18**. A preliminary layout of the WWTP, the on-site distribution system, and the proposed pipelines to the Chevron® recycled water system is provided on **Figure 3-19**. Under Wastewater Treatment Variant A, two on-site lift stations would be installed that include two 25-horsepower pumps and a 4-inch force main to overcome existing terrain.

^{4 4} Wastewater generation was conservatively estimated based on Option 1 as residential uses have a higher water demand than commercial uses.

Wastewater Treatment Variant B – Connection to City Sewer System

Under Wastewater Treatment Variant B, the Applicant would install a new force main along a proposed segment of the San Francisco Bay Trail (Variant B1) or Stenmark Drive (Variant B2) and Western Drive to bring sanitary sewer service to the Project Site from an existing 12-inch sanitary sewer line at the intersection of Tewksbury Avenue and Contra Costa Street in Point Richmond. A preliminary layout of the proposed pipeline options is provided on **Figure 3-20**. Under Wastewater Treatment Variant B, two onsite lift stations would be installed that include two 100-horsepower pumps and an 8-inch force main to overcome existing terrain, as well as a third lift station on Marine Street near the connection point to the existing system.

3.4.6.3 Storm Drainage Systems

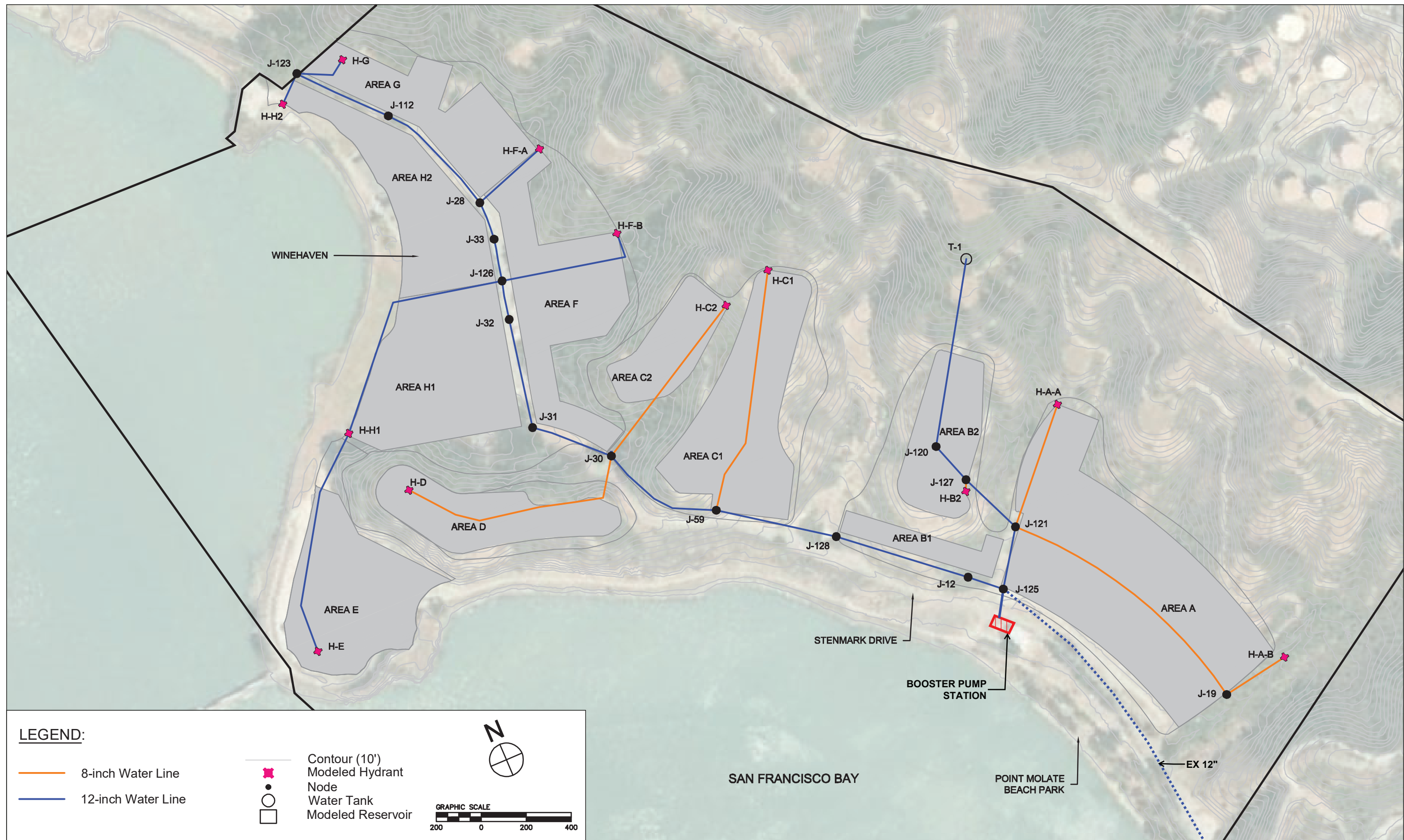
As discussed in **Appendix C**, the proposed drainage system is designed to convey 10-year design storm in the pipe with hydraulic grade line below the rim of the catch-basin or manhole. For storms larger than 10 year, runoff would be carried in the street ROW including runoff from the 100-year storm. Low points in the street and terrain where overland release or conveyance could flood property or has potential to damage surrounding areas would be intercepted and conveyed in the pipe. The County drainage guidelines are used to size the proposed storm drain system and to verify the capacity of the existing outfalls that the proposed system would connect to.

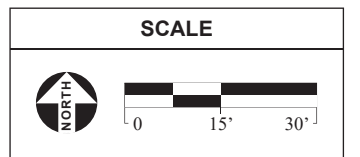
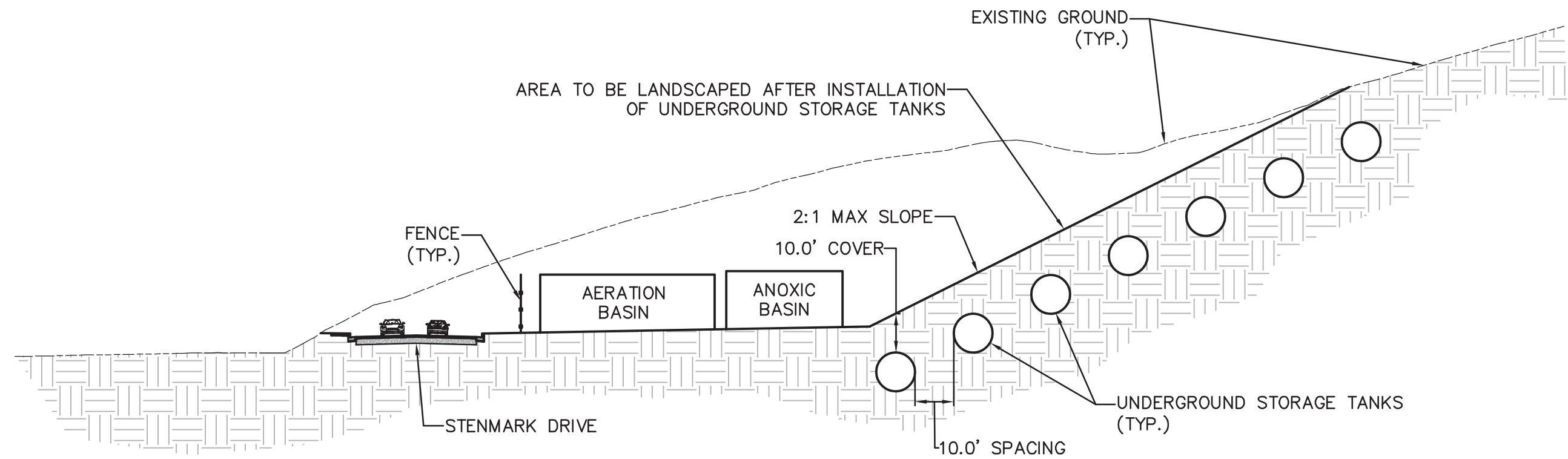
The Modified Project would need fewer outfalls than what currently exist. Any unused outfalls would be abandoned in place. Since the outfall pipes currently daylight to the shoreline above the edge of the water, these improvements would not impact habitat below water. Outfalls 2 and 10 may need to be upsized to accommodate some additional flows. The proposed system would be designed with energy dissipaters so that the post-project flow velocities are less than the pre-project velocities.

To control operational stormwater pollution and protect surface water quality, the Modified Project will incorporate low impact development (LID) features and centralized stormwater capture facilities to treat runoff prior to discharging to the Bay pursuant to San Francisco Municipal Regional Permit (MRP) C.3 treatment requirements. LID treatment facilities and flow-control facilities that may be incorporated into the Modified Project include any of the combination of the following: bioretention areas, flow through planters, pervious pavements, depressed landscaped areas, and green roofs in series with cisterns, vaults, and/or dry wells (**Appendix C**). During detailed design, the Modified Project will refine the size and location of these centralized stormwater capture facilities and LID features that treat runoff prior to discharging to the Bay to meet MRP requirements. Project Site runoff quality is expected to comply with and potentially exceed applicable water quality objectives for all of the pollutants of concern for the protection of beneficial uses.

3.4.6.4 Solid Waste

Solid waste would be generated during construction and operation of the Modified Project. During construction, the Modified Project would follow the City's requirements for disposal and recycling. Solid waste generation from the operation of the various components of the Modified Project is estimated to be





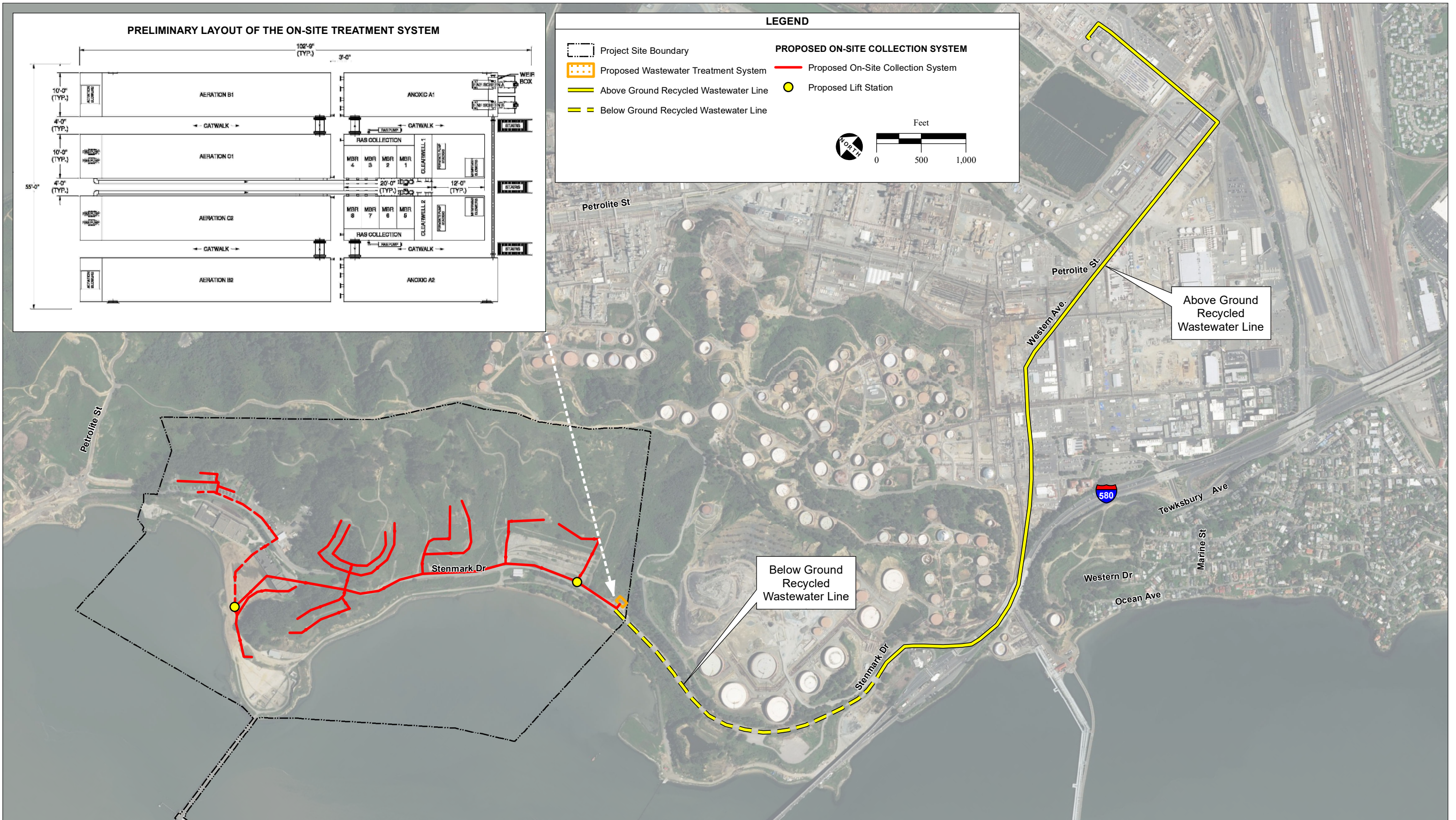
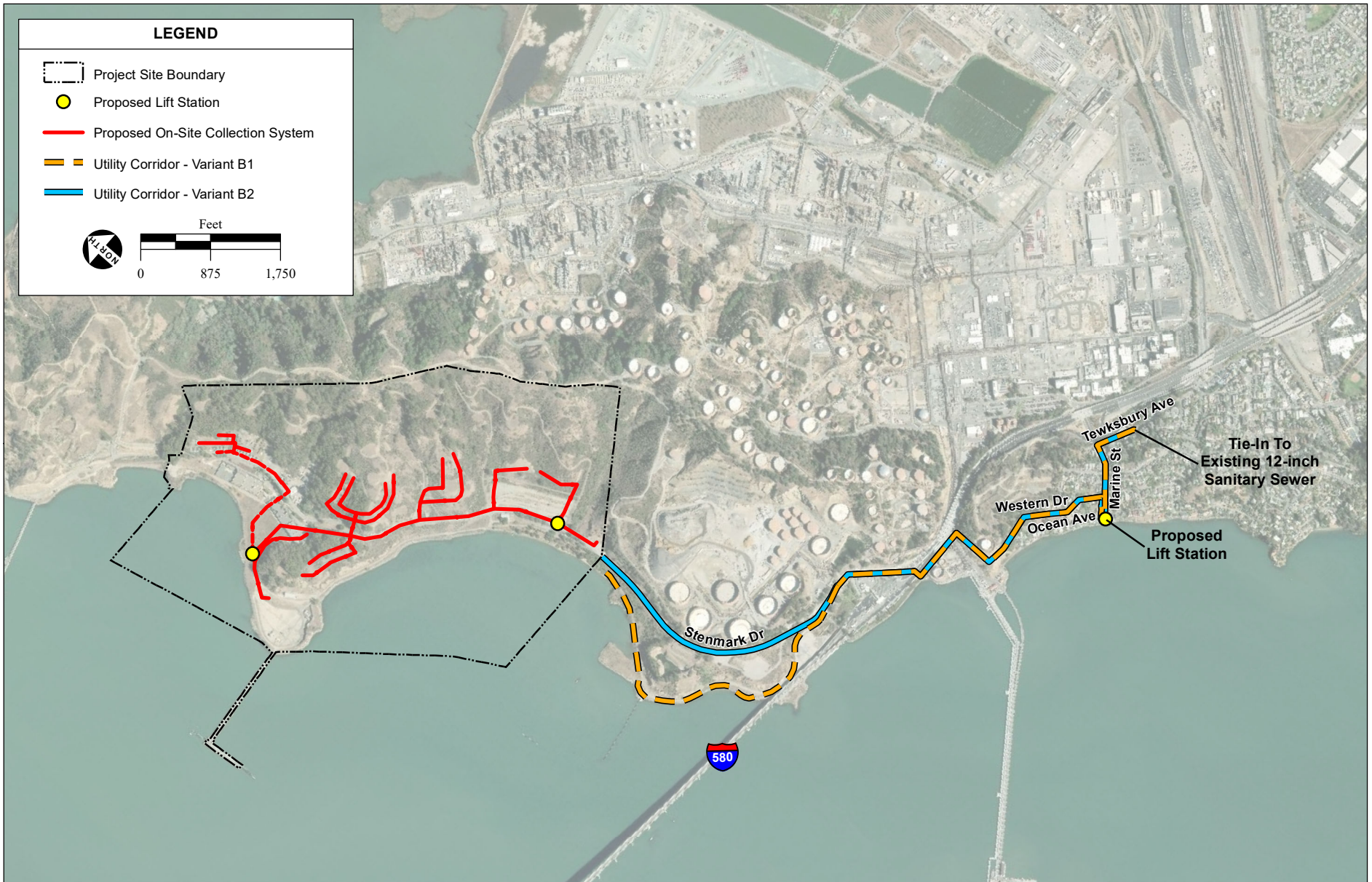


Figure 3-19
Wastewater Treatment Variant A – Onsite Wastewater Treatment Facility



SOURCE: "San Quentin, CA" USGS Topographic Quadrangle, T1N, R3W,
Unsectioned Area of San Pablo Strait, Mt. Diablo Baseline & Meridian;
AES, 2/18/2020

Point Molate Mixed-Use Development SEIR / 216544 ■

Figure 3-20
Wastewater Treatment Variant B – Connection to City Sewer System

between 9.3 tons per day under Option 2 and 12.6 tons per day under Option 1 (**Table 3-2**). The Modified Project would be served by the City's waste provider, which divides solid wastes into three types: recycling, compost, and trash.

TABLE 3-2
SOLID WASTE GENERATION

Unit Type	Commercial-Heavy Development	Option 2 (Commercial-Heavy Option): Estimated Solid Waste	Residential-Heavy Development	Option 1 (Residential-Heavy Option): Estimated Solid Waste
Residential				
Dwelling Units ¹	1,260 units	15,410 pounds/day	2,040 units	24,949 pounds/day
Commercial				
Full-Service Restaurant ²	40,000 sq. ft.	200 pounds/day	40,000 sq. ft.	200 pounds/day
Commercial ³	584,572 sq. ft.	2,923 pounds/day	0 sq. ft.	0 pounds/day
		Total: 18,533 pounds/day = 9.3 tons/day		Total: 25,149 pounds/day = 12.6 tons/day
Notes: ¹ Residential solid waste generation based on a factor of 12.23 pounds per household per day ² Restaurant solid waste generation based on a factor of 5 pounds per 1,000 sq. ft. per day ³ Commercial solid waste generation based on a factor of 5 pounds per 1,000 sq. ft. per day Source: CalRecycle, 2019d.				

3.4.6.5 Electrical and Natural Gas Service

Electrical demand for the Modified Project is estimated at 5,860 kVA and natural gas demand is estimated at 350,150 Million British Thermal Units per hour (**Appendix H**). Electricity and natural gas would be obtained from Pacific Gas and Electric (PG&E), and telecommunications would be obtained from Comcast and AT&T. Will-Serve letters sent by the service providers that acknowledges their willingness and availability to serve the Project Site are included in **Appendix H**.

As described in **Appendix H**, there is an existing PG&E single-phase overhead primary distribution system about .5 miles south of the Project Site. The density of the Modified Project would require PG&E to extend three-phase to the Project Site and then distribute to multiple three-phase and single-phase transformers, as needed to provide service to the Project Site. **Figure 3-21** illustrates the alignments of the proposed off-site PG&E gas and electric infrastructure improvements.

3.5 CONSTRUCTION

From the completion of entitlement, the applicant assumes approximately 18 to 24 months to complete **DESIGN, FINAL ENGINEERING, AND ENVIRONMENTAL PERMITTING REQUIRED TO BEGIN CONSTRUCTION. CONSTRUCTION OF THE** Modified Project and all infrastructure improvements, onsite and offsite, would be built over 7 to 9 years. Development is anticipated to proceed from south to north, following the improvements to Stenmark Drive. Development could be scheduled in a manner in which some Planning Areas are available for occupancy while others are being constructed (i.e., residents could possibly be living in Planning Area A while Planning Area B is being constructed).

3.5.1 GRADING

As described in **Appendix I**, the Modified Project would involve grading that would result in roughly 300,000 cubic yards (CY) of exported soil. The grading design is primarily focused on maintaining natural drainage patterns and avoiding wetlands areas in order to minimize grading and protect the natural character of the hills. Several Planning Areas would utilize retaining walls within the Development Areas to limit cut grading and provide minimal sloping along residential streets. To prevent erosion, corrective grading is not to exceed a slope of 2:1. Fill material would be exported by truck, barge, or a combination of the two. Exportation by barge would occur via the pier located onsite.

3.5.2 HAZARDOUS MATERIALS REMEDIATION

Documented releases have occurred from the former Navy operations at the Project Site, and therefore remediation would be completed as part of the development of the Modified Project in compliance with the 2010 CRUP. To facilitate the investigations and remedial activities, the Project Site has been subdivided into different areas. This includes the following IR Sites (**Figure 3-9**).

- IR Site 1: Former Waste Disposal Area and Closed Landfill
- IR Site 2: Sandblast Grit Areas
- IR Site 3: Treatment Pond Area
- IR Site 4: Drum Lot 1, Drum Lot 2, and Building 87

Furthermore, other areas of remediation concern include the USTs, former small arms firing range, LBP, transformers, railroad tracks, fuel pipelines, aboveground storage tanks (AST), and more (**Appendix G**).

The Point Molate Site is currently subject to the requirements of the RWQCB Order No. R2-2011-0087 that mandates the cleanup, maintenance, and/or monitoring of IR Site 1, IR Site 3, IR Site 4, and the hillside USTs (Appendix A in **Appendix G**). IR Site 2 is a site that was closed by the RWQCB prior to transfer and is not subject to additional cleanup per the RWQCB Order. As mentioned in **Section 3.2.6**, the 2010 CRUP restricts use of the Point Molate Site for residential or any permanent human habitat. Compliance with Order No. R2-2011-0087 would be mandatory as compliance with this order would allow amendments to be made to the 2010 CRUP to permit the residential uses proposed under the Modified Project. Remediation would be required for the different areas of the Project Site, including removal of contaminated soil. The quantities would vary depending upon the requirements of the RWQCB and actual soil conditions encountered during the remediation work activities. **Table 3-3** presents the quantities of soil that may need to be excavated under different scenarios for remediation purposes during the development of the Modified Project in addition to quantity required for grading (**Appendix G**).

The remediation required for the different areas of the Point Molate, described in greater detail below, came from the remediation report prepared by Terraphase (**Appendix J**). The remediation report included different scenarios for the extent of remediation required to reflect the different environmental conditions that might be encountered.

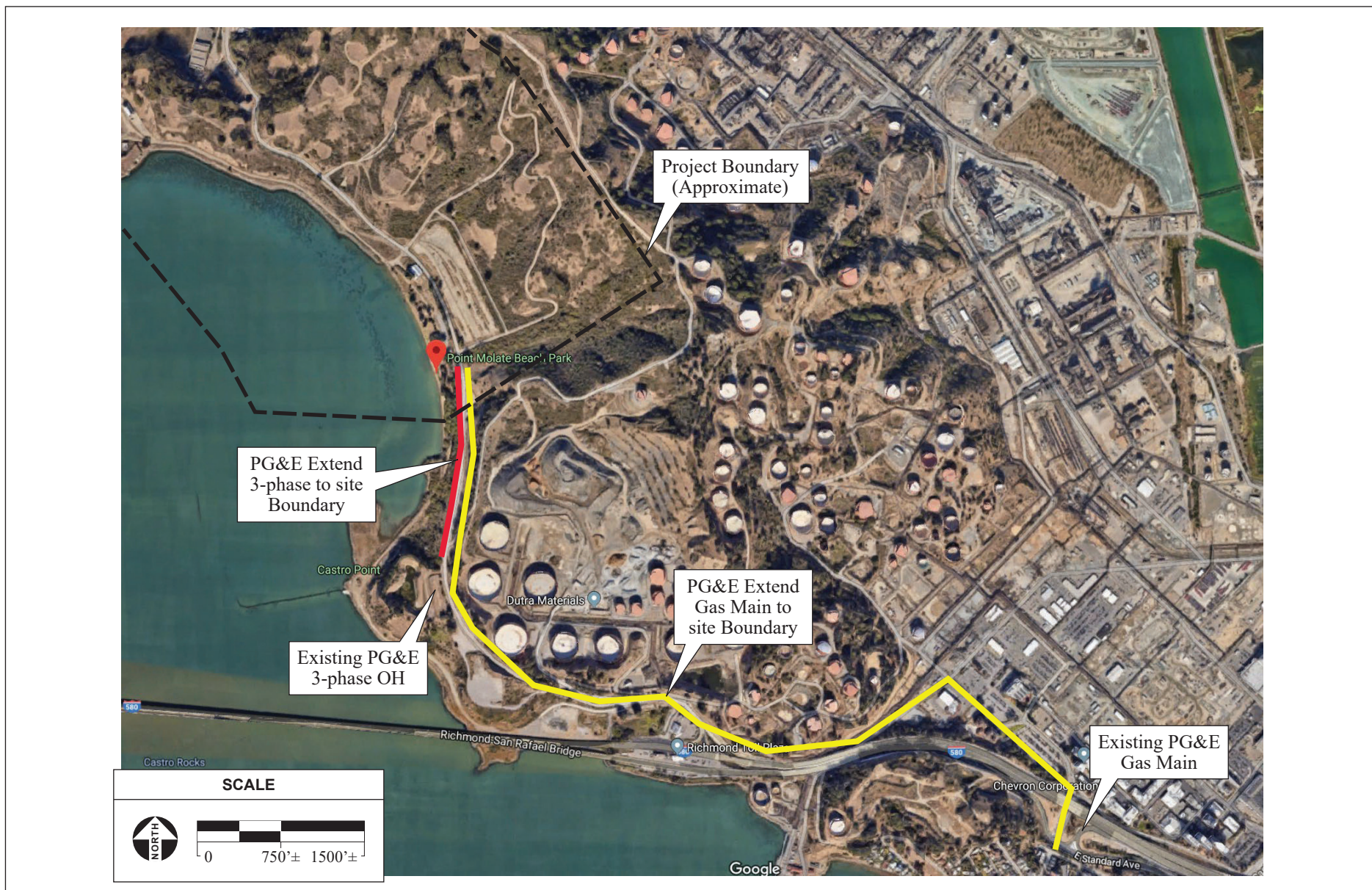


TABLE 3-3
TOTAL QUANTITY AND TYPE OF SOIL REQUIRING EXCAVATION

	Non-Hazardous	California-Regulated Non-RCRA Hazardous Waste	Totals
Best-case scenario	4,400 CY	560 CY	4,960 CY
Most likely case scenario	19,100 CY	1,310 CY	21,410 CY
Worst-case scenario	37,400 CY	2,940 CY	40,340 CY
Notes: These quantities are in addition to the 300,000 CY estimated for export as part of the grading operation discussed in Section 3.5.1 . RCRA – Resource Conservation and Recovery Act Source: Appendix I, Appendix J			

3.5.2.1 IR Site 1: Landfill Area

IR Site 1 is not intended for residential or commercial development under the Modified Project. Therefore, no additional remediation would be required for the Modified Project. The Project Site is actively monitored per the requirements of RWQCB Order R2-2011-0087. However, the Modified Project proposes residential uses within 1,000 feet of the closed landfill, and for those units the Applicant would confer with the RWQCB and the County Health Department (as the Local Enforcement Agency), and comply with applicable post closure land use regulations, such as California Code of Regulations, Title 27, § 21190.

3.5.2.2 IR Site 2: Sand Black Grit Areas

Areas 2A and 2B of IR Site 2 are intended for residential development under the Modified Project. Therefore, remediation would be necessary as part of the development process. Currently, samples collected in all of the areas of IR Site 2 exceed the current Tier 1 Environmental Screening Levels for various compounds (cadmium, lead, nickel, and zinc). Confirmation samples collected at Areas 2A and 2B indicate concentrations of metals, primarily lead, that exceed the current residential standards for unrestricted Project Site use. RWQCB issued a No Further Action Letter for the sand blast grit areas in 2000 allowing for unrestricted use of the Project Site, but this standard has been lowered by California regulators since this cleanup was completed in 1997.

Because Areas 2A and 2B are likely to be developed for residential uses, and spots in these areas exceed 80 parts per million of lead, additional characterization of the extent of the lead contamination in the soil is warranted. This risk would be mitigated through a remedial action under RWQCB oversight. Remedial action would be soil removal and disposal. Given the extent of these areas, the total soil removal would likely be less than 1,000 CY with the following being the possible scenarios.

- **Best-Case Scenario:** Removal of 0.5 foot of soil over 10 percent of Area 2A (25,500 sq. ft.) and 2B (8,500 sq. ft.) would be approximately 60 CY of soil requiring excavation.
- **Most Likely Case Scenario:** Removal of 0.5 foot of top soil over 50 percent of Area 2A (25,500 sq. ft.) and 2B (8,500 sq. ft.) would be approximately 310 CY of soil requiring excavation.
- **Worst-Case Scenario:** Removal of 1 foot of topsoil over 75 percent of Area 2A (25,500 sq. ft.) and 2B (8,500 sq. ft.) would be approximately 940 CY of soil requiring excavation.

The contaminated soil that is excavated would be disposed appropriately after proper characterization. Based on the lead contamination anticipated to be found in this material, this material would likely be disposed of as a California-regulated non-Resource Conservation and Recovery Act (RCRA) hazardous waste and would be required to follow appropriate regulations as such.

3.5.2.3 IR Site 3: Treatment Ponds Area

Portions of IR Site 3 are within the planned residential development under the Modified Project. Therefore, remediation would be necessary as part of the development process. However, currently, the Project Site is being remediated to the satisfaction of the RWQCB per R2-2011-0087 and per Task 3b of that Order. Furthermore, the Remedial Action Completion Report is currently being reviewed and commented on by the RWQCB. The RWQCB has issued a letter stating that upon modification of the SGWMP for the Project Site, additional soil-gas sampling, and revising the document to respond to their comments, the 2010 CRUP can be modified to allow for restricted residential uses. After approval of the Remedial Action Completion report and completion of the modified CRUP, and therefore remediation, the potential risk to residential site users would be mitigated.

3.5.2.4 IR Site 4: Drum Lot 1, Drum Lot 2 and Building 87

Portions of IR Site 4 are within the planned residential development under the Modified Project. Therefore, remediation would be necessary as part of the development. Current remediation for IR Site 4 includes groundwater monitoring as part of the site-wide groundwater monitoring program. Per RWQCB Order R2-2011-0087 Task 4c, a Risk Assessment shall be performed to evaluate whether additional remedial actions are necessary to allow for proposed land-use. If remedial action is necessary, it is required to be completed to the satisfaction of the RWQCB per Task 4d of the RWQCB Order. This requires the proposal of a final feasibility study and remedial action plan that has cleanup goals and a time schedule for sub-actions to attain the final cleanup. The following scenarios are possible for cleanup.

- **Best-Case Scenario:** No remediation activities would be required at IR Site 4.
- **Most Likely Case Scenario:** Vapor mitigation would be required for Drum Lot 1 and approximately 40,000 sq. ft. by 5 feet bgs would be required for excavation at Drum Lot 2 in order to meet restricted residential standards for Drum Lot 2 of approximately 7,400 CY of excavated soil.
- **Worst-Case Scenario:** Vapor mitigation would be required at Drum Lot 1 in the northwest portion and approximately 80,000 sq. ft. by 5 feet bgs would be required for excavation at Drum Lot 2 in order to meet residential cleanup goals of approximately 14,800 CY of soil of excavated soil.

The soil excavated from these scenarios would be disposed of offsite as nonhazardous.

3.5.2.5 Storage Tanks

A number of USTs and ASTs are or have historically been located at the Project Site. Some of the USTs are in areas planned for areas that would be graded under the Modified Project and/or are in areas planned for residential development. Therefore, remediation would be necessary as part of the development process as land use restrictions prohibit residential development in the area above the

USTs and within 150 feet. Further, if the land is being disturbed for grading, the applicant would remove the UST. Currently, the USTs are structurally closed in-place, but regulatory environmental closure has not been granted for all these USTs from the RWQCB, and groundwater monitoring occurs as part of the site-wide groundwater monitoring program. The ASTs have been identified as *de minimis* conditions.

Underground Storage Tanks 2, 3, 5, 6, 8, 13, 15, 18, and 19 - Open Large Hillside USTs

USTs 2, 3, 5, 6, 8, 15, 18 and 19 are planned for removal as part of the proposed development and associated grading activities. The removal of the USTs is subject to the requirements of RWQCB Order R2-2011-087 - Task 6 - UST Removal Plan. Mass grading would be necessary for the removal of the USTs. Depending on the Project Site conditions encountered during UST removal, additional contaminated soil may require excavation and off-site disposal. Based on the data available to date, the following range of soil removal can be expected.

- **Best-Case Scenario:** Approximately 300 CY per UST, or 2,400 CY, of petroleum-affected soil (approximation is based on 1 foot of additional removal over approximately 25 percent of the area of the removed UST).
- **Most-Likely Case Scenario:** Approximately 900 CY per UST, or 7,200 CY, of petroleum-affected soil (approximation is based on 1 foot of additional removal over approximately 75 percent of the area of the removed UST).
- **Worst-Case Scenario:** Approximately 1,800 CY per UST, or 14,400 CY, of petroleum-affected soil (approximation is based on 1 foot of additional removal over approximately 150 percent of the area of the removed UST).

The petroleum-affected soil would be removed from the Project Site for disposal offsite as nonhazardous.

UST 13 would remain in place after development.

Underground Storage Tanks 1, 4, 7, 9, 10, 11, 12, 14, 16, 17 and 20 - Closed Large Hillside Underground Storage Tanks

USTs 1, 4, 7, 9, 10, and 20 are planned for removal as part of the proposed development and associated grading activities. The removal of the USTs is subject to the requirements of RWQCB Order R2-2011-087 - Task 6 - UST Removal Plan. Similar to the open USTs described above, in addition to the mass grading necessary for the removal of the USTs, an additional 1 foot of underlying soil would be excavated. Depending on the Project Site conditions encountered during UST removal, additional contaminated soil may require excavation and off-site disposal. Based on the data available to date, the following range of soil removal can be expected.

- **Best-Case Scenario:** Approximately 100 CY per UST, or 700 CY, of petroleum-affected soil (approximation is based on 1 foot of additional removal over approximately 10 percent of the area of the removed UST).
- **Most-Likely Case Scenario:** Approximately 250 CY per UST, or 1,750 CY, of petroleum-affected soil (approximation is based on 1 foot of additional removal over approximately 25 percent of the area of the removed UST).

- **Worst-Case Scenario:** Approximately 500 CY per UST, or 3,500 CY, of petroleum-affected soil (approximation is based on 1 foot of additional removal over approximately 50 percent of the area of the removed UST).

Any petroleum-affected soil exceeding applicable limits would be removed from the Project Site for off-site disposal at an appropriate facility that handles hazardous waste.

USTs 11, 12, 14, and 16 would remain in place after development.

Small Underground Storage Tanks

All of the smaller USTs are located within the residential grading and development footprint. One 13,000-gallon UST at Building 6 and 15 heating oil USTs near the former housing units located at the Point Molate Site were closed in place. Per Navy documents, these tanks have been closed in place but have not been investigated. Potential risks to human health and the environment would be investigated and remediated as necessary under the oversight of the RWQCB. These tanks would likely be closed per the Low-Threat Underground Storage Tank Case Closure Policy documented in State Water Board Resolution No. 2012-0016. To gain regulatory closure, remediation activities could include the following actions.

- **Best-Case Scenario:** Removal of in place USTs and soil equivalent to one time the volume of the USTs would be required. This equates to approximately 100 CY of petroleum-affected soil.
- **Most-Likely Case Scenario:** Removal of in place USTs and soil equivalent to three times the volume of the USTs would be required. This equates to approximately 300 CY of petroleum-affected soil.
- **Worst-Case Scenario:** Removal of in place USTs and soil equivalent to 10 times the volume of the USTs would be required. This equates to approximately 1,000 CY of petroleum-affected soil.

The petroleum-affected soil would be removed from the Project Site for off-site disposal as nonhazardous.

Aboveground Storage Tanks

The ASTs onsite have been identified as a *de minimis* condition (**Appendix G**). However, any surface contamination encountered in the vicinity of the ASTs during the implementation of the Modified Project would be handled in accordance with the requirements of the SGWMP (Appendix D of **Appendix G**).

3.5.2.6 Electrical Transformers

Transformers are located within areas proposed for residential development under the Modified Project. Therefore, remediation would be required as part of the development process. Transformers where polychlorinated biphenyls (PCB) are detected in oil greater than 1 part per million are identified as areas requiring monitoring and/or remediation as they have impacted shallow soil. Seventeen transformers were identified as containing PCBs at levels greater than laboratory reporting limits. Potential PCB spills from transformer would be investigated under RWQCB oversight prior to demolition activities to identify

any leaks that require response action. After the removal of the 17 transformers, potential risks to human health and the environment would be remediated depending on the scenario encountered.

- **Best-Case Scenario:** Additional soil removal is not necessary after the removal of transformers.
- **Most-Likely Case Scenario:** After the removal of five transformers, approximately 10 CY per transformer or 50 CY in total of PCB-contaminated soil would be excavated.
- **Worst-Case Scenario:** After the removal of 10 transformers, approximately 10 CY per transformer or 100 CY in total of PCB-contaminated soil would be excavated.

The soil excavated from these scenarios would be disposed of offsite as nonhazardous.

3.5.2.7 Former Small Arms Firing Range

Parcel 14, where the former small arms firing range is located, is not intended for residential or commercial development under the Modified Project. Therefore, no remediation would be required.

3.5.2.8 Lead-Based Paint

Buildings affected by LBP are present in the residential development footprint under the Modified Project. Therefore, remediation would be required as part of the development process. LBP has been identified on exterior surfaces of buildings at the Project Site. LBP on exterior surfaces can chip and flake and result in lead contamination in soil near the driplines of buildings. In the RWCCB-approved SGWMP, protocols have been developed to manage lead-contaminated soil in the building driplines. This SGWMP was prepared in accordance with Task 2 of RWQCB Order R2-2011-0087. Risk associated with LBP would be mitigated by implementing the RWQCB-approved protocols in the SGWMP. The scenarios for remediation are the following with the assumption that 50 percent of the dripline is not covered by hardscape, and therefore must be tested.

- **Best-Case Scenario:** 25 percent of the approximately 10,000 linear feet of dripline is affected, and therefore excavation of contaminated soil 1 foot deep and 10 feet wide around the building would be required where contamination occurs. This equates to approximately 500 CY of LBP-affected soil.
- **Most-Likely Case Scenario:** 50 percent of the approximately 10,000 linear feet of dripline is affected, and therefore excavation of contaminated soil 1 foot deep and 10 feet wide around the building would be required where contamination occurs. This equates to approximately 1,000 CY of LBP-affected soil.
- **Worst-Case Scenario:** 100 percent of the approximately 10,000 linear feet of dripline is affected, and therefore excavation of contaminated soil 1 foot deep and 10 feet wide around the building would be required where contamination occurs. This equates to approximately 2,000 CY of LBP-affected soil.

The excavated soil would be disposed of appropriately after proper characterization. Based on the lead contamination likely found in this material, it is assumed this material would be disposed of as a California-regulated non-RCRA hazardous waste and follow appropriate regulations as such.

3.5.2.9 Asbestos-Containing Material and Other Hazardous Building Materials

Buildings with known hazardous building material are located within the proposed residential development footprint under the Modified Project. These primarily include ACMs and LBP. Therefore, remediation would be required as part of the development process. These buildings, if not intended for preservation, would undergo demolition and then disposal. Per City requirements, before any structures at the Project Site are demolished, hazardous building material survey and abatement would be required to attain the demolition permit. Asbestos abatement is subject to Bay Area Air Quality Management District requirements. Risk associated with hazardous material in the buildings to be demolished would be mitigated through implementation of proper abatement strategies in compliance with local and state regulations.

3.5.2.10 Groundwater Monitoring

Groundwater contamination related to petroleum is currently undergoing risk evaluations for potential ecological affects in the Bay and is being monitored via groundwater wells that would not be disturbed by the Modified Project. The evaluation of petroleum in groundwater is part of the remediation process for IR Site 3. If risk to the ecology in the Bay are identified from the groundwater contamination, additional remediation of the shoreline groundwater would be implemented as necessary to mitigate the risk. However, potential treatment or removal actions would be primarily along the shoreline of the Bay and not within the footprint of the residential development. Therefore, no additional removals would be required to redevelop the Project Site for residential uses.

3.5.2.11 Railroad Tracks

While residential development is not proposed under the Modified Project for most of the railroad tracks that are located predominantly along the shoreline, there is residential development proposed where railway was located in IR Drum Lot 1 and IR Drum Lot 2. Land located approximately 500 feet adjacent to IR Site 4 Drum Lot 2 and 4,800 linear feet north of IR Site 3 are within the residential footprint and are discussed here. Therefore, remediation would be required as part of the development process. The railroad coincides with other areas previously investigated for petroleum hydrocarbons. Other contaminants associated with railroads from this time period are lead arsenate pesticides. Remediation activities would mean the excavation of soil about 1 foot bgs and 25 feet wide to meet residential standards. The quantity of soil removed would depend on the length of railroad track contaminated as scenarios below present.

- **Best-Case Scenario:** 25 percent of the track length would require soil removal. Approximately 1,200 CY of soil would be removed.
- **Most-Likely Case Scenario:** 50 percent of the track length would require soil removal. Approximately 2,400 CY of soil would be removed.
- **Worst-Case Scenario:** 75 percent of the track length would require soil removal. Approximately 3,600 CY of soil would be removed.

The excavated soil would be disposed of offsite as nonhazardous.

3.6 PERMITS AND APPROVALS

Implementation of the Modified Project would require federal, State of California, and City permits and approvals. **Table 3-4** identifies each permitting agency and the potential permit or approval required.

TABLE 3-4
PERMITS AND APPROVALS REQUIRED

Agency	Permit or Approval
Federal	
U.S. Environmental Protection Agency	National Pollutant Discharge Elimination System General Permit for Stormwater Discharges from Construction Activities as required by the Clean Water Act
	Clean Water Act Section 401 Water Quality Certification
U.S. Army Corps of Engineers	Approval of permit(s) under Section 404 of the Clean Water Act for the filling of jurisdictional wetlands/waters
U.S. Fish & Wildlife Service	Section 7 Consultation under the federal Endangered Species Act if endangered species may be affected by the Modified Project
U.S. National Marine Fisheries Service	Consultations under the federal Endangered Species Act and Magnuson-Stevens Fishery Conservation and Management Act if endangered species or essential fish habitat may be affected.
State/Local	
California Statewide Communities Development Authority	Approval of the Community Facilities District Infrastructure Finance Program
California State Historic Preservation Office	Consultation under Section 106 of the National Historic Preservation Act
San Francisco Bay Conservation and Development Commission	Commission Permit for activities within 100 feet of the Bay and Consistency Determination with the Bay Plan and Coastal Zone Management Act
California Department of Fish and Wildlife	Lake or Streambed Alteration Agreement
State Lands Commission	Permit and lease for pier modifications and use of off-shore area for ferry service
California RWQCB	Water quality certification under Section 401 of the Clean Water Act for construction or operation of facilities that would result in discharge into waters of the State (as regulated under the Porter Cologne Act) or navigable waters of the U.S, including those presently underground.
Caltrans	Approval of an Encroachment Permit for the construction of mitigation improvements.
City of Richmond	Approval of a General Plan Amendment and zoning changes, including a Planned Area Plan changes.
	Approval of subdivision map.
	Approval of Disposition and Development Agreement with Winehaven Legacy LLC.
	Approval of encroachment permits for Stenmark Drive widening, off-site utility alignments and connections, and off-site roadway improvements.
	Approval of a conditional use permit to permit development of the waterfront park in the shoreline band
	Approval of a certificate of appropriateness and design review
Contra Costa County	Certification of the SEIR.
	Contra Costa County encroachment permits and approvals may be required for road improvements within the County ROW.

SECTION 4.0

ENVIRONMENTAL ANALYSIS

4.0. ENVIRONMENTAL ANALYSIS

4.0.1 SCOPE OF THE ANALYSIS

Section 4.0 of this Draft Subsequent Environmental Impact Report (SEIR) contains individual sections that describe the potential environmental impacts of the Point Molate Mixed-Used Development Project (Modified Project), described in **Section 3.0**, Project Description, as required by the California Environmental Quality Act (CEQA) and the Guidelines and Procedures for the Implementation of CEQA of the City of Richmond (City; City of Richmond, 2003). This section includes the environmental analysis for topics that the City determined the Modified Project may adversely impact, and therefore require additional environmental review in an SEIR, in accordance with Public Resources Code (PRC) § 21166 and CEQA Guidelines §§ 15162 and 15163. As described in **Section 1.4**, the City's scoping process for this Draft SEIR, as well as its consideration of previous environmental review conducted for previous proposals on the Project Site, were factored into the City's determination that environmental review shall be conducted for each of the following environmental topics:

Section 4.1 Aesthetics

Section 4.2 Air Quality and Greenhouse Gas Emissions

Section 4.3 Biological Resources

Section 4.4 Cultural Resources and Tribal Cultural Resources

Section 4.5 Energy

Section 4.6 Geology, Soils, and Mineral Resources

Section 4.7 Hazards, Hazardous Materials, and Wildfire

Section 4.8 Hydrology and Water Quality

Section 4.9 Land Use and Planning

Section 4.10 Noise

Section 4.11 Population and Housing

Section 4.12 Public Services and Recreation

Section 4.13 Transportation

Section 4.14 Utilities and Service Systems

Section 5.0 CEQA Considerations

Section 6.0 Alternatives

4.0.2 FORMAT AND CONTENT OF EACH ANALYSIS SECTION

Each section covering an environmental resource (**Sections 4.1** through **4.14**) is organized as follows.

- **Regulatory Setting:** Identifies the laws, regulations, ordinances, plans, and policies that are relevant to each resource area.
- **Environmental Setting:** Provides an overview of the physical environmental conditions at approximately the time of the publication of the Notice of Preparation (NOP) for the Draft SEIR

that could be affected by implementation of the Modified Project in accordance with CEQA Guidelines § 15125.

- Final Environmental Impact Report for the Point Molate Mixed-Use Tribal Destination Resort and Casino Project (2011 FEIR) Analysis: Provides a summary of the conclusions of the 2011 FEIR and summarizes any changes that occurred between the certification of the 2011 FEIR and the publication of the NOP for the Modified Project.
- Impacts: Each section presents the analysis of project-level and cumulative impacts for the respective resource area. An impact summary table precedes the discussion of each impact analysis and includes the impact reference number (e.g., Impact 4.1.1); the impact statement; a summary statement of the Modified Project's impact before mitigation; list of applicable mitigation measures, if any; a statement of the Modified Project's impact after any identified mitigation measures; and a summary statement of how the impact compares with the findings of the 2011 FEIR. The background for the cumulative analysis, including a description of the CEQA requirements for cumulative analysis, the approach for the analysis in this SEIR, cumulative context, and a summary of cumulatively considerable impacts, is presented in **Section 5**.
- Mitigation Measures: Identifies measures to mitigate significant impacts in accordance with CEQA Guidelines § 15126.4 by:
 - avoiding the impact altogether by not taking a certain action or parts of an action;
 - minimizing impacts by limiting the degree or magnitude of the action and its implementation;
 - rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
 - reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and/or
 - compensating for the impact by replacing or providing substitute resources or environments.

Mitigation measures that were identified in the 2011 FEIR have been reviewed to determine if they remain appropriate for the Modified Project. Where 2011 FEIR mitigation measures will address impacts of the Modified Project, they are identified as such. Through a review of the 2011 FEIR mitigation measures it was determined that some measures required revisions to adequately address impacts of the Modified Project by updating or other revisions, or were not applicable to the Modified Project. **Appendix K** provides a summary of whether each mitigation measure from the 2011 FEIR was revised, deleted, or kept as is, and also provides a reasoning for that determination.

4.0.3 APPROACH TO THE ANALYSIS

The following discussion addresses key components of the approach and assumptions applied to the analysis in this Draft SEIR.

4.0.3.1 PROJECT STUDY AREA

The Modified Project study area differs among resources, depending on the locations where impacts could be expected. For example, air quality impacts are assessed for the air basin (macroscale) as well as the site vicinity (microscale), whereas aesthetic impacts are assessed for the Project Site vicinity only and greenhouse gas emissions are assessed globally.

4.0.3.2 ENVIRONMENTAL SETTING BASELINE

Regulatory Requirements

The CEQA Guidelines § 15125(a) state that: “An EIR [Environmental Impact Report] must include a description of the physical environmental conditions in the vicinity of the project. This environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant.” Section 15125(a)(1) states, “Generally, the lead agency should describe physical environmental conditions as they exist at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, from both a local and regional perspective.”

When establishing baseline physical conditions for the reuse of a military base, CEQA Guidelines § 15125(b) indicates that the lead agency should refer to Section 15229. Section 15229 states that the baseline “may, at the discretion of the lead agency, be based upon the physical conditions which were present at the time that the federal decision for the closure or realignment of the base or reservation became final.” Likewise, PRC § 21083.8.1 states, “When preparing and certifying an environmental impact report for a reuse plan . . . the determination of whether the reuse plan may have a significant effect on the environment may be made in the context of the physical conditions that were present at the time that the federal decision became final for the closure or realignment of the base.”

2011 FEIR Baseline

As summarized in **Section 1.2.2**, the 2011 FEIR baseline conditions were defined specifically by topic in the 2011 FEIR, generally as existing conditions at the time of the preparation of the EIR analysis.

SEIR Updated Environmental Setting

As noted in **Section 1.4.3.2**, commenters on the NOP for the SEIR requested that the SEIR’s impact analysis use the environment when the NOP was published as the baseline, as opposed the 2011 FEIR baseline or the date of base closure baseline. In response to scoping comments, and because of the substantial amount of time that has passed since the preparation of the 2011 FEIR, which began years before the document was certified in 2011, the environmental setting has been updated for this SEIR and the analysis uses the settings as they existed at the time the NOP was published as environmental baseline.

As described in **Section 1.3**, CEQA Process and Public Review Opportunities, preparation of technical studies was initiated following issuance of the NOP for the Modified Project SEIR on July 12, 2019. Existing conditions are presented by resource area, with information and data required for the analysis of a specific resource. Examples of updated setting information include updated background traffic data, updated biological resources site surveys, and updated ambient noise data. Generally existing conditions are considered to be those existing at the time of the NOP. Changes that have occurred on the Project Site since the preparation of the 2011 FEIR are also described in **Section 4**, Environmental Analysis.

Use of updated environmental setting information not only responds to concerns expressed in scoping comments, but it provides a more conservative analysis, as it accounts for current data on environmental

resources potentially affected as well as growth and change outside of the Project Site that may affect the analysis, such as ambient air quality and traffic conditions on roadways affected by Modified Project-related traffic.

SEIR Baseline

Baseline conditions vary depending on environmental resource and the definition of baseline conditions is explicitly defined for each environmental resource analyzed in **Section 4**, Environmental Analysis. Each of the environmental resource sections includes a discussion of physical conditions in the vicinity of the study area under baseline conditions. A resource's environmental setting constitutes the baseline from which the impacts of the Modified Project are measured and evaluated.

4.0.3.3 ENVIRONMENTAL IMPACT ANALYSIS

Project Analyzed Includes Off-Site Improvements

The analysis in **Section 4**, Environmental Analysis, addresses the direct and indirect impacts of the Modified Project on the environment pursuant to CEQA. The project analyzed, as described in **Section 3**, Project Description, includes both the development of the Modified Project on the Project Site, and the off-site improvements that are proposed as part of the Modified Project. Off-Site improvements include the following components, as illustrated in **Figure 4.0-1**:

- Widening of Stenmark Drive;
- Extension of electrical and natural gas utilities infrastructure; and
- Development of wastewater treatment and conveyance infrastructure.

Project Analyzed Implements a Portion of the Bay Trail Project

As discussed in **Section 1.4.4**, the development of a 2.5-mile extension of the San Francisco Bay Trail (Bay Trail) was approved by the City as a separate project and analyzed in an Initial Study/Mitigated Negative Declaration in 2018. 1.5 miles of this 2.5-mile portion of the Bay Trail run through the Project Site and the Modified Project would construct this portion. Therefore, the impact analysis and associated mitigation measures presented in that document are incorporated by reference as appropriate, and the Modified Project would implement those mitigation measures when constructing the portion of the Bay Trail extension project on the Project Site.

Analysis Scenarios – Residential-Heavy Development and Commercial-Heavy Development

As described in **Table 3-1**, the Modified Project proposes two options: Option 1 (Residential-Heavy Option) and Option 2 (Commercial-Heavy Option). Both options are analyzed in this SEIR. These options are described in **Table 4.0-1**.

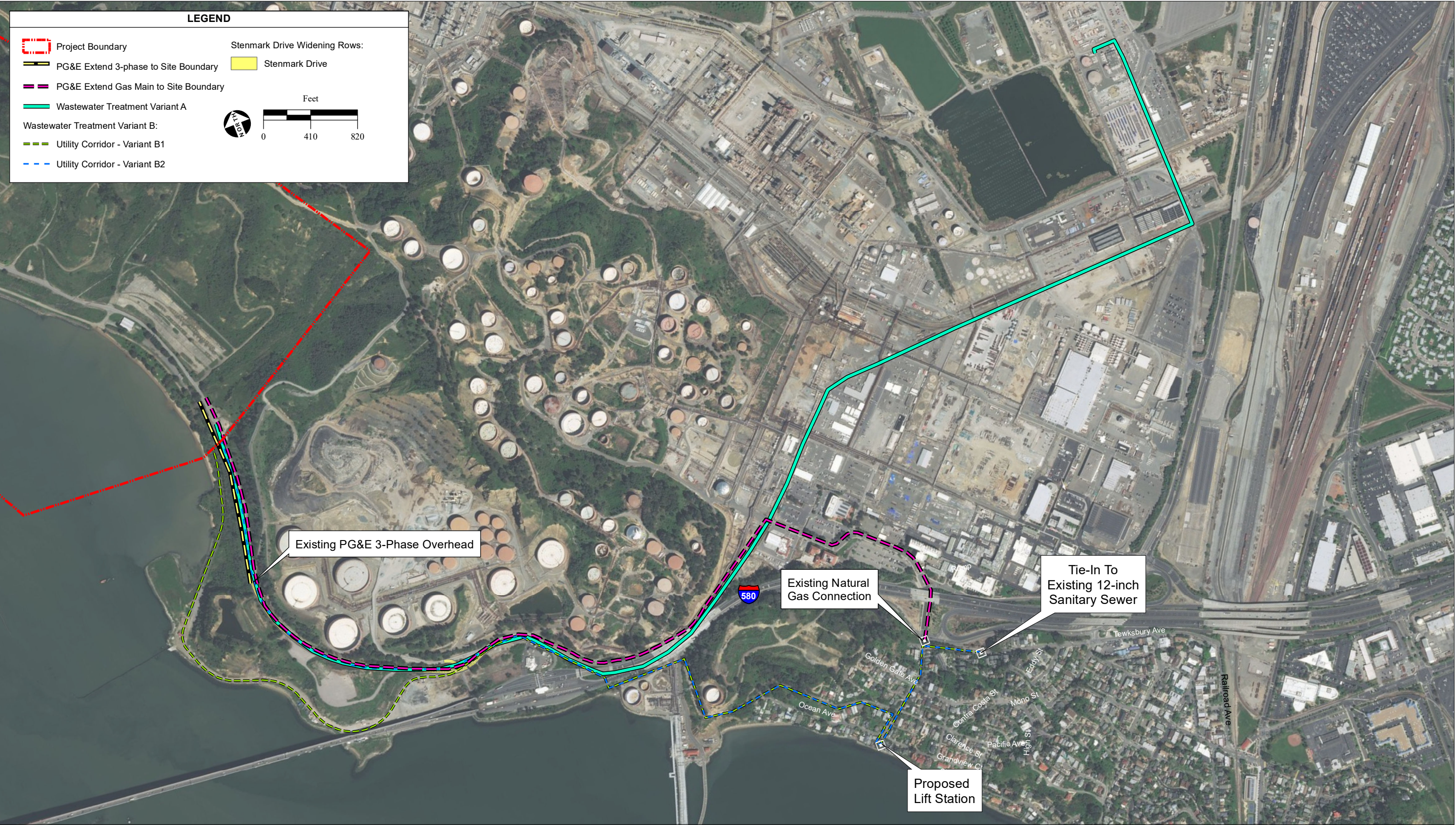


Figure 4.0-1
Off-Site Improvements

TABLE 4.0-1
DEVELOPMENT SCENARIOS

Unit Type	Option 1 (Residential-Heavy Option)	Option 2 (Commercial-Heavy Option)
Dwelling Units	2,040 units	1,260 units
Restaurant	40,000 square feet	40,000 square feet
Commercial	0 square feet	584,572 square feet

The analysis throughout **Section 4.0** presents the analysis of the most impactful option, which varies according to the environmental resource. A description of the assumptions made for each resource analysis where the impacts would differ between scenarios is included in the Method of Analysis discussion for each resource and are described in terms of Residential-Heavy or Commercial-Heavy development. An explanation of how it was determined which would result in greater impacts is included in each resource chapter.

This Draft SEIR applies the significance criteria identified in the provisions in the 2019 CEQA Guidelines for determining the significance of environmental effects, including CEQA Guidelines §§ 15064, 15064.3, 15064.4, 15064.5, 15064.7, 15065, 15382, and Appendix G, as well as the *City of Richmond Guidelines and Procedures for the Implementation of CEQA* (City of Richmond, 2003).

Significance Determination Conclusions

The following level of significance classifications are used throughout the impact analysis in this Draft SEIR.

- **No Impact:** No noticeable effect on the environment would occur, as measured by the applicable significance threshold (no mitigation required).
- **Less-Than-Significant Impact:** A less-than-significant impact would cause no substantial adverse change in the environment (no mitigation required).
- **Potentially Significant Impact:** A potentially significant impact may cause a substantial change in the environment; however, it is not certain that effects would exceed specified significance criteria. For CEQA purposes, a potentially significant impact is treated as if it were a significant impact. Mitigation measures and/or project alternatives are identified to reduce project impacts to the environment.
- **Significant Impact:** A significant impact would cause a substantial adverse change in the physical conditions of the environment. Significant impacts are identified by the evaluation of effects using specified significance criteria. Mitigation measures and/or project alternatives are identified to reduce or avoid project impacts to the environment.
- **Significant and Unavoidable Impact:** A significant and unavoidable impact would result in a substantial change in the environment that cannot be avoided or mitigated to a less-than-significant level if the project is implemented.

4.0.3.4 COMPARATIVE IMPACT DETERMINATIONS IN THIS DRAFT SEIR

Each impact identified for the Modified Project is compared to the corresponding impact of the Casino Project in the 2011 FEIR to disclose whether the Modified Project would have a new or substantially more

significant environmental impact not previously identified in the 2011 FEIR. The 2011 FEIR also analyzed a set of alternatives, some of which have characteristics similar to the Modified Project. As described in **Section 1.2.1.3**, overall land uses and development plan characteristics of the Modified Project are similar to the scope of Alternative D, but, like Alternative B1, the Modified Project proposes to rehabilitate all of the contributing historic buildings that are in the Winehaven Historic District.

4.1 AESTHETICS

4.1.1 INTRODUCTION

This section provides a description of visual conditions in the Point Molate Mixed-Use Development Project (Modified Project) area and describes the changes to those conditions that would result from implementation of the Modified Project. Following an overview of the relevant regulatory setting in **Section 4.1.2** and the environmental setting in **Section 4.1.3**, project-related impacts and identified mitigation measures are presented in **Section 4.1.5** and **Section 4.1.6**, respectively. The impacts related to aesthetics, including those associated with the Casino Project and analyzed as Alternative A in the *Final Environmental Impact Report for the Point Molate Mixed-Use Tribal Destination Resort and Casino Project* (2011 FEIR), are also summarized in **Section 4.1.4** and compared to the impacts of the Modified Project.

4.1.2 REGULATORY SETTING

4.1.2.1 State

California State Scenic Highway Program

In 1963, the California Legislature established the California Scenic Highway Program through Senate Bill 1467, provisions of which were added to the Streets and Highways Code. A highway is designated as scenic depending upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development blocks scenic views (California Department of Transportation [Caltrans], 2019). Scenic highway designation does not preclude development; however, a corridor protection program would ensure development is compatible with scenic resource protection and consistent with community values (Caltrans, 2019).

Title 24 Outdoor Lighting Zones

The California Energy Commission has published the *2019 Building Energy Efficiency Standards* for residential and non-residential buildings (Title 24, part 6). These standards took effect January 1, 2020 and include mandatory requirements for outdoor lighting such as maximum brightness and shielding. These requirements vary based on the Lighting Zone the building is located in. Lighting Zones range from Zone 0 (undeveloped open spaces) to Zone 3 (urban areas). Lighting Zone 4 exists, however this designation can only be granted when a local government applies for exceptionally high lighting allowances. Lighting Zones are intended to help limit light pollution and ensure light levels are appropriate for the region.

4.1.2.2 Local

San Francisco Bay Plan

The San Francisco Bay Plan (Bay Plan) was adopted by the Bay Conservation and Development Commission (BCDC) in 1968. A year later the Bay Plan was submitted to the California Legislature and Governor; the Governor then designated the BCDC as the agency responsible for maintaining and carrying out the provisions of the Bay Plan. The Bay Plan contains information that describes the values associated with the San Francisco Bay (Bay), policies regarding future uses of the Bay and its shoreline,

and maps that direct the protection and development of the Bay and its tributary waterways, marshes, managed wetlands, salt ponds, and shoreline in accordance with these policies (BCDC, 2019).

Relevant policies for the Point Molate shoreline from the Appearance, Design, and Scenic Views section of the Bay Plan consist of the following:

- Policy No. 1** To enhance the visual quality of development around the Bay and to take maximum advantage of the attractive setting it provides, the shores of the Bay should be developed in accordance with the Public Access Design Guidelines.
- Policy No. 2** All Bayfront development should be designed to enhance the pleasure of the user or viewer of the Bay. Maximum efforts should be made to provide, enhance, or preserve views of the Bay and its shoreline, especially from public areas, from the Bay itself, and from the opposite shore. To this end, planning of waterfront development should include participation by professionals who are knowledgeable of the Commission's [BCDC] concerns, such as landscape architects, urban designers, or architects, working in conjunction with engineers and professionals in other fields.
- Policy No. 4** Structures and facilities that do not take advantage of or visually complement the Bay should be located and designed so as not to impact visually on the Bay and shoreline. In particular, parking areas should be located away from the shoreline. However, some small parking areas for fishing access and Bay viewing may be allowed in exposed locations.
- Policy No. 8** Shoreline developments should be built in clusters, leaving areas open around them to permit more frequent views of the Bay. Developments along the shores of tributary waterways should be Bay-related and should be designed to preserve and enhance views along the waterway, so as to provide maximum visual contact with the Bay.
- Policy No. 14** Views from the Bay from vista points and from roads should be maintained by appropriate arrangements and heights of all developments and landscaping between the view areas and the water. In this regard, particular attention should be given to all waterfront locations, areas below vista points, and areas along roads that provide good views of the Bay for travelers, particularly areas below roads coming over ridges and providing a "first view" of the Bay.¹

Relevant policies from the Public Access section of the Bay Plan consist of the following.

- Policy No. 13** The Public Access Design Guidelines should be used as a guide to siting and designing public access consistent with a proposed project. The Design Review Board should

¹ Policy No. 14 has been revised above and does not reflect the exact language included in the Bay Plan. Policy No. 14 within the Bay Plan includes a reference to Bay Plan Map No. 8, Natural Resources of the Bay. This map was removed from the Bay Plan, but a few references to Map No. 8 erroneously remain within the Bay Plan text (BCDC, 2020b). For that reason, Map No. 8 is no longer relevant to the Bay Plan and has therefore been excluded from the discussion presented in this SEIR.

advise the Commission [BCDC] regarding the adequacy of the public access proposed. The Design Review Board should encourage diverse public access to meet the needs of a growing and diversifying population. Public access should be well distributed around the Bay and designed or improved to accommodate a broad range of activities for people of all races, cultures, ages, income levels, and abilities.

Relevant policies from the Recreation section of the Bay Plan consist of the following.

Policy No. 4-c Historic buildings in waterfront parks and wildlife refuges should be developed and managed for recreation uses to the maximum practicable extent consistent with the Bay Plan Map policies and all of the following.

1. Physical and visual access corridors between inland public areas, vista points, and the shoreline should be created, preserved, or enhanced. Corridors for Bay-related wildlife should also be created, preserved, and enhanced where needed and feasible.
2. Historic structures and districts listed on the National Register of Historic Places or California Registered Historic Landmarks should be preserved consistent with applicable State and federal historic preservation laws and should be used consistent with recreation policies in the Bay Plan. Public access to the exterior of these structures should be provided. Public access to the interiors of these structures should be provided where appropriate.
3. To assist in generating the revenue needed to preserve historic structures; to develop, operate, and maintain park improvements; and to achieve other important public objectives, uses other than water-oriented recreation, commercial recreation, and public assembly facilities may be authorized only if they would: (a) not diminish recreational opportunities or the park-like character of the site; (b) preserve historic buildings where present for compatible new uses; and (c) not significantly, adversely affect the fish, other aquatic life, and wildlife and their habitats within the site.

The Bay Plan Map 4 (**Figure 4.9-1**) includes the Point Molate Site (Project Site) and surrounding areas and provides specific policies. The following policy is provided for the Point San Pablo Peninsula that includes the Project Site.

“Create a regional open space and park facility. Limited commercial development at Point Molate should be compatible with proposed regional park.”

Additionally, the Naval Fuel Depot (NFD) is included in the Bay Plan Map 4 policies and is within the Project Site. The Bay Plan policy for the NFD is as follows.

“Develop for park use. Landward of Western Drive should be developed consistent with Recreation Policy 4-b. Provide trail system linking shoreline park areas and vista points in hillside open space areas.

Provide public access to historical district with interpretation of this resource. The Point Molate Pier should be re-used for water-oriented recreation and incidental commercial recreation. Encourage water-oriented recreation, including mooring facilities for transient recreational boats, excursion craft and small water craft. Protect existing eelgrass beds."

While the Modified Project is inconsistent with this policy of the Bay Plan to designate the entire Project Site for park use, the policy applies to areas that are beyond BCDC's jurisdictional boundaries. In fact, the Bay Plan policy is inconsistent with the Reuse Plan for the Project Site portion outside the BCDC's jurisdictional boundaries. However, the Modified Project includes elements such as construction of Bay Trail extension, shoreline park, 193 acres of open space, water taxi services, protection of eel grass beds and enhanced access for the public to the shoreline in general, which are generally consistent with the major elements of this policy. As such, the Modified Project, and specifically the development proposed within the BCDC jurisdiction, the Modified Project is generally consistent with the Bay Plan policy.

Shoreline Spaces Public Access Design Guidelines for the San Francisco Bay

The BCDC is responsible for promoting public access to the Bay, including maintaining views of the Bay from publicly accessible areas. To ensure public views of the Bay are protected, the BCDC created a handbook of design guidelines for public shorelines on the Bay titled *Shoreline Spaces* in 2005 (BCDC, 2005). The guidelines provide suggestions for site planning as well as recommendations for designing and developing attractive and usable public access areas. The guidelines provide a set of suggested general design principles for the shoreline of the Bay. According to the guidelines, each development should maximize views of the Bay and provide access to and along the shoreline. To accomplish this, the guidelines provide seven objectives.

1. Make public access public.
2. Make public access usable.
3. Provide, maintain, and enhance visual access to the Bay and its shoreline.
4. Maintain and enhance the visual quality of the Bay, shoreline, and adjacent developments.
5. Provide connections to and continuity along the shoreline.
6. Take advantage of the Bay setting.
7. Ensure that public access is compatible with wildlife through siting, design, and management strategies.

Additionally, the guidelines provide suggestions regarding how each objective could be accomplished. To maintain and enhance visual quality, the guidelines suggest using forms, materials, colors, and textures that are compatible with the Bay and adjacent development.

4.1.2.3 City of Richmond General Plan 2030

The General Plan provides guidance with respect to visual resources within the City. This guidance is provided in the form of goals, policies, and actions that aim to preserve and enhance the character and natural resources of the City. The General Plan contains 15 elements, five of which are most relevant to

aesthetic resources: the Economic Development Element; the Land Use and Urban Design Element; the Conservation, Natural Resources, and Open Space Element; the Community Facilities and Infrastructure Element; and the Parks and Recreation Element. The Modified Project's consistency with the policies provided within these elements is located within **Appendix L**. The Economic Development Element provides direction for long-term economic growth in the City, including taking advantage of the views of the Bay from the City.

The following policies are related to the Economic Development Element using the visual resources of the City.

Policy ED1.7 *Richmond's Waterfront as a Community Amenity.* Continue to redevelop the waterfront in the City as a publicly accessible amenity to attract new residential and commercial development and provide expanded recreational activities and open space. Waterfront sites with quality views can be leveraged for residential, commercial, and recreational uses. Parks within the City should also be maintained and enhanced to maximize their benefit to the community and as an attraction for new businesses.

Policy ED8.7 *Visual Appearance.* Support efforts to enhance the appearance of all industrial, commercial, multi-unit residential, institutional, and public properties in the City. The City supports property owners in their efforts to implement improvements such as landscaping, signage, lighting, and other urban design elements. These steps will help promote these areas as models for mixed-use development and attract the co-location of residential and industrial uses in areas where they do not currently exist. Develop urban design guidelines and require these to be incorporated into new development and encourage their application by existing uses.

Policy ED9.2 *Public Access to the Shoreline.* Improve public access to the Bay. Expand trails, viewpoints, parking, interpretive signs, restrooms, and other supporting infrastructure to allow visitors easy access to green space, the shoreline, and the Winehaven Historic District (Historic District). The San Pablo Peninsula should also offer indoor/outdoor recreation opportunities including active and passive open space (such as sports fields, trails, picnic areas, and campsites) as well as family-oriented museums and interactive visitor centers. Fully improved, this area has the potential to become a valuable amenity for the community as well as a regional destination.

The Land Use and Urban Design Element provides a framework for decisions about land use and development patterns. The Element defines goals for providing vibrant urban corridors, active public spaces, and enhanced neighborhood character. Goals, policies and implementing actions seek to maximize development opportunities that respect established neighborhoods and historic assets and promise to stimulate social and economic activity. This element includes the following policies related to visual resources.

Policy LU1.4 *Active Streets and Safe Public Spaces.* Provide an appropriate mix of uses, high-quality design, and appropriate programming of uses to facilitate natural surveillance in public spaces. Improve the sense of safety for potential users by providing and maintaining amenities and services such as restrooms, street furniture, bus shelters, street lighting,

trees for shade, public art, and secure bicycle parking, and by restricting or prohibiting uses that are incompatible with community needs and priorities including, but not limited to, liquor stores and smoke shops.

Policy LU3.3 *Recreation and Tourism Industry.* Support the emerging recreation and tourism economy by protecting, enhancing, and showcasing natural, cultural, and historic resources and assets. Encourage the creation of tourist-serving amenities and infrastructure in key areas such as Southern Shoreline, Point Molate, and Downtown, and enhance amenities in existing tourist destinations such as Point Richmond. Expand and complete the [San Francisco Bay Trail] Bay Trail to enhance regional connections with the shoreline in the City. Support the development of the southern shoreline as the “Richmond cultural heritage shoreline” to promote economic development in the City while protecting historic and cultural resources and providing opportunities for interpretation, education, and recreation.

The Conservation, Natural Resources, and Open Space Element aims to foster the preservation of the natural resources, including open spaces and scenic views, within the City. This element includes the following goal and policies related to visual resources.

GOAL CN2 *Conserved Open Space.* Conserve open space to ensure that the expansive shoreline, network of parklands, trails, hillsides, and undeveloped natural areas within the City remain viable in supporting biological communities and providing sanctuary for future generations. Conserve open space, expand public access to open space, where appropriate, and acquire additional lands where feasible. Continue to protect surrounding hills and viewsheds as character-defining features that provide scenic backdrops, as well as publicly accessible trails and vistas.

Policy CN2.2 *Richmond Shoreline.* Minimize the impacts of development on the shoreline with special attention to intensity, density, and proximity to the water. Conserve, protect, and enhance natural and cultural resources along the City’s shoreline. Promote a balance of uses along the shoreline that supports multiple community needs such as economic development, recreation, historic preservation, and natural resource protection.

- Provide a mix of residential and recreation uses in the Southern Gateway change area; support an active industrial waterfront around the Port and along the Santa Fe Channel; and promote a cultural heritage shoreline west of the Port.
- Protect and restore wetlands, native habitats and open space; develop shoreline parks and trails to increase public access; encourage recreation and tourism activities; and enhance and showcase historic and cultural resources. Prepare, adopt, and implement plans that will to protect natural and built environments from adverse potential impacts of sea level rise due to climate change.

Policy CN2.3 *Natural Topography and Hillside Protection.* Protect natural topography to preserve and enhance the natural beauty of the City and require developers to concentrate residential development in areas lower than 400 feet (ft.) in elevation. The natural

characteristics of the Berkeley Hills, San Pablo Ridge, El Sobrante Ridge, Point Potrero, and San Pablo Peninsula should be protected and enhanced by regulating allowable methods of site preparation, grading, soil repair, foundation design, and topographic alteration, as well as the height, color, material, and siting of structures and roadways, quantities of cut and fill, placement of utility crossings, and removal of vegetation.

The Parks and Recreation Element focuses on preserving resources and enriching parks and recreational offerings. Parks, greenways, and trails within the City improve community image and provide a visual break from the built environment. The following policy is relevant to visual resources.

Policy PR2.1 High-Quality, Distinctive Parks. Provide safe, high-quality, and distinctive community gathering places with broad appeal. Designing parks with attention to placemaking will foster social interaction, community identity, beauty, and livability. Each park in the City should try to draw on the unique cultural, historic, or environmental qualities of an area to create high-quality, distinctive parks where people of all ages and abilities can share experiences.

The Community Facilities and Infrastructure Element presents a framework for the City to provide services, amenities and infrastructure for today's residents as well as future generations. Goals and policies seek to improve municipal facilities and services to meet community needs as the City grows.. The following policy is relevant to visual resources.

Policy CF1.3 Impacts on Neighborhoods. Protect the quality of life for residents, businesses, and visitors. Consider health, safety, and aesthetic impacts of siting new or existing infrastructure and utilities and ensure that impacts and benefits are not disproportionately distributed to any part of the City.

In addition to the general policies described above, there are specific guidelines for change areas in the City including the Project Site, which is part of the San Pablo Peninsula Area (Change Area 13). The Land Use and Urban Design Element outlines the desired trajectory for the urbanization of the San Pablo Peninsula Area, an area envisioned as a place characterized by development that augments and respects the historic resources and natural features of the site. The built and open space fabric should elevate the role of the San Pablo Peninsula as a unique local and regional destination.

The San Pablo Peninsula area includes the NFD that is located within the Project Site. The General Plan includes the following guidance on the NFD and the Point Molate area.

“Improvements to public areas should be guided, for the most part, by the 1997 Point Molate Reuse Plan, except any references encouraging the demolition of Building 6. In general, improvements to public areas should connect the varied open and built spaces through a new network of intimate curvilinear streets and pedestrian and bicycle paths. Where possible, these new connections should build upon existing underutilized paths to minimize impacts on the natural environment. Connections should emphasize pedestrian and bicycle access along shared roadways

and trails. Natural sanctuaries including the many groves of trees should remain undisturbed and become part of a larger open space preserve. Public gathering spaces should be provided at major destinations such as vista points and trailheads to further accentuate the unique natural environment. New landscaping should integrate the existing native planting palette with the peninsula's unique character. In the former Point Molate Navy Fuel Depot [NFD] area, adaptive reuse of historic buildings and new development should seek to reinforce the original rural village character of the area. New buildings should keep a small-scale to reinforce the sense of a hillside town. In general, variety of building uses are encouraged in the private areas including entertainment, lodging, and waterfront commercial. All development should respect the natural topographic context. New buildings should blend into the natural and cultural landscape. Sustainable design practices and elements should be an intrinsic part of new buildings.” (City of Richmond, 2012)

As discussed in **Section 3.6**, the Modified Project proposes modifications to the description of Change Area 13, including the above-quoted text.

4.1.2.4 City of Richmond Zoning Ordinance

The City Zoning Ordinance, Article XV of the Richmond Municipal Code (RMC; City of Richmond, 2016b), separates land uses into specific geographic districts and details specific development standards for buildings within each. Development standards include restrictions such as height, lot coverage, setbacks, and parking. The Project Site contains the zoning districts Parks and Residential, Light Industrial, Multi-Family Residential, Single-Family Hillside Residential, and General Commercial, with a Landmark Overlay and an Interim Study Overlay. The Project Site is within the Interim Study Overlay Zone, therefore discretionary review of development proposals is allowed in areas where changes in zoning regulations are contemplated or under study. Refer to **Section 4.9.2** for further discussion regarding the zoning and allowable development under each zone.

Furthermore, the Zoning Ordinance allows for the creation of Planned Area (PA) Districts. As mentioned in **Section 3.4.1**, the Modified Project proposes to rezone the Planning Areas to PA Districts. PA Districts allow for cohesive development throughout a broad area. Rezoning of the PA District requires a PA Plan, which is subject to design review. Design reviews are conducted by the City's Design Review Board (described in detail below). In order for the PA Plan and rezoning to be approved, the City must make the following findings.

- A. The proposed development is consistent with the General Plan, including the height, density, and intensity limitations that apply unless these limitations are to be amended.
- B. The subject site is physically suitable for the type and intensity of the land use being proposed.
- C. Adequate transportation facilities and public services, as defined in the General Plan and in the design standards established in the Subdivision Regulations exist or will be provided in accordance with the conditions of Planned Area Plan approval to serve the proposed development; and the approval of the proposed development will not result in a reduction of

transportation service for all modes of travel or public services so as to be a detriment to public health, safety, or welfare.

- D. The proposed development will not have a substantial adverse effect on surrounding land uses and will be compatible with the existing and planned land use character of the surrounding area.
- E. The development generally complies with applicable design guidelines.
- F. The proposed development is demonstratively superior to the development that could occur under the standards applicable to the underlying base district, and will achieve superior community design, environmental preservation and/or substantial public benefit. (City of Richmond, 2016b)

The City Zoning Ordinance includes general standards for development related to visual resources. The Lighting and Illumination (Article 15.04.604) section of the Zoning Ordinance controls outdoor lighting to protect against direct glare and excessive lighting (City of Richmond, 2016b). In general, all outdoor lighting must be turned off during daylight hours and any hours when the building is not in use and lighting is not required for security. Additionally, all outdoor lighting must be designed, located, installed, and directed downward, be shielded, and maintained to prevent glare, light trespass, and light pollution to the maximum extent feasible.

The City has provided different lighting standards depending on which Lighting Zone the site falls within. The Zoning Ordinance specifies which Zoning District falls within each of the City's Lighting Zones.

Lighting Zone LZ3. Areas of high ambient lighting levels. This Zone includes the CM-3, CM-4, and CM-5, CG, CR, IB, IL, IG, and IW zoning districts.

Lighting Zone LZ2. Areas of medium ambient lighting levels. This Zone includes the RL2, RM, CM-1, CM-2, LW, CC, ILL, and PCI zoning districts.

Lighting Zone LZ1. Areas of low ambient lighting levels. This Zone includes the RH, RL1, PR, OS, and AG zoning districts.

Although the PA District does not fall within any of these Lighting Zones, the application process for the PA District requires submission of a lighting plan. Due to the proposed residential and commercial uses, it is assumed that the Planning Areas would fall within LZ2 and LZ3 Areas. LZ2 and LZ3 require fully shielded outdoor fixtures if initial output is greater than 2,000 lumens. In parking lots serving multi-family or non-residential uses, the maximum height of freestanding light fixtures is 20 feet or 15 feet if within 20 feet of a single family low or very low density zoning district. The waterfront park and hillside open space areas would be in the LZ1 Area, which requires low ambient lighting levels.

The Zoning Ordinance's General Site Regulations contain further standards for visual development. The General Site Regulations control the height, materials and design of fences in Residential, Mixed Use, Commercial and Industrial Districts (Article 15.04.601.060). It limits open storage of goods, materials, machines, equipment, and vehicles or parts and requires screening and setbacks for storage areas (Article 15.04.601.070) and for equipment (Article 15.04.601.110). The Refuse, Recycling, and Green Waste Storage Areas (Article 15.04.601.090) section of the Zoning Ordinance establishes design and locational criteria for the construction of refuse, solid waste, recycling, and green waste container storage

areas. Additionally, the Zoning Ordinance requires electrical, telephone, cable television, fiber-optic cable, gas, water, sewer, irrigation/recycled water, to be installed underground within the site, unless determined to be infeasible or exempt. The Modified Project would be designed to meet all applicable zoning requirements.

City of Richmond Design Review Board

The Design Review Board for the City, as described in Articles 15.04.802.040 and 15.04.805 of the RMC, is established to conduct design review of proposed development. The Design Review Board makes the decision to approve, approve with conditions, or deny a design for any non-exempt project that is subject to design review; as described above, this includes proposed development within a PA District. The Board must evaluate if the design complies with the policies of the General Plan, any applicable specific plan, or design guidelines, and if it is consistent with any other policies or guidelines the City Council may adopt for this purpose. Additional design criteria are as follows.

- The overall design of the project, including its scale, massing, site plan, exterior design, and landscaping, reflects design integrity and the relationship of form and function in a coherent manner.
- The project design evidences a sense of place; does not overwhelm or adversely impact adjoining properties; and respects prevailing setbacks and the scale of neighboring buildings and how they relate to the street.
- The project design elements, materials, signage, and landscaping are internally consistent, fully integrated with one another, and applied in a manner that is visually consistent with the proposed architectural design.
- Lighting and lighting fixtures are designed to complement buildings, be of appropriate scale, provide adequate light over walkways and parking areas to create a sense of pedestrian safety, and avoid creating glare.
- The proposed building design and landscaping supports public safety and security by allowing for surveillance of the street by people inside buildings and elsewhere on the site.
- Landscaping is designed to be compatible with and enhance the architectural character of the buildings onsite. Proposed planting materials avoid conflicts with views, lighting, and signage.

Where appropriate, the Design Review Board may also impose conditions related to design impacts of the project (RMC § 15.04.930.110).

General Site Regulations

The City Zoning Ordinance also includes Article 15.04.601 General Site Regulations. This article includes standards for screening of equipment from public view. According to these standards, equipment must be screened on all sides. When screening with plants, evergreen types of vegetation must be planted and maintained.

4.1.3 ENVIRONMENTAL SETTING

Information provided in this section is derived from a number of sources including site maps, photos, and the City's General Plan. This analysis focuses on the manner in which development could alter the

Project Site under baseline conditions, which are defined for the purposes of the analysis in this section as physical conditions on or around the publication of the Notice of Preparation (NOP) in July 2019.

4.1.3.1 Regional Setting

The City of Richmond is centrally located in the Bay Area on the western edge of Contra Costa County. The City has over 32 miles of shoreline; the San Pablo and San Francisco Bays border the City to the north, west, and south. The region contains a mixture of rolling hills, residential communities, and industrial areas. Much of the land use in the City is related to its industrial and maritime past. The City is at the center of many major transportation networks including Interstate 80 and Interstate 580 (I-580), shipping ports, and the Bay Area Rapid Transit System. The shoreline was historically used for shipping and industry and now features trails, parks, scenic views, and historic sites, as well as heavy industry (City of Richmond, 2012).

4.1.3.2 Project Site Vicinity Setting

The San Pablo Peninsula is geographically and topographically separated from other urban areas of the City, as shown in **Figure 4.1-1**. Stenmark Drive runs through the Project Site and connects to I-580 approximately 1.5 miles southeast of the Project Site. The vicinity surrounding the Project Site is dominated by industrial uses and open space. Current uses on the peninsula include the Chevron®-Richmond Refinery, a chemical plant, railroad terminals, parks, and a yacht harbor. The Chevron® refinery facilities cover over half of the peninsula (City of Richmond, 2012). Chevron® owns lands adjacent to the Project Site. To the north of the Project Site is open space that serves as a buffer for Chevron® oil operations, a rod and gun club for Chevron® employees, and a marina. Further to the north lies the Point San Pablo Yacht Harbor. To the east is Potrero Ridge, dominated on its east side by above-ground storage tanks and refinery facilities owned and operated by Chevron®. As shown in **Figure 4.1-1**, Potrero Ridge serves as a topographical barrier that separates the Project Site from these facilities. The ridge also blocks views of the rest of the City from the Project Site.

4.1.3.3 Project Site Visual Resources

Despite the highly industrialized land uses in the vicinity, the Project Site has retained a visual character reflecting its natural and developed history. The eastern boundary of the Project Site follows Potrero Ridge, which runs northwest to southeast. The western boundary of the Project Site extends into the Bay and includes the pier at Point Molate. Surface elevations range from approximately 350 ft. above mean sea level along Potrero Ridge to sea level at the Bay. Steep knolls extending from the ridge to the point divide the property into northern and southern areas. Slopes on the Project Site range from approximately zero to 46 percent. Stenmark Drive runs through gently rolling terrain in the southern and northern areas of the Project Site, climbing and descending the knoll between these two areas.

Views from the Project Site

The western border of the Project Site is adjacent to the Bay, thus offering many views of the Bay. **Figure 4.1-2** provides a selection of views that can be seen from the Project Site. Photo 1 displays views to the west, which include the Bay, the Richmond-San Rafael Bridge, and Mount Tamalpais in the distance. Looking southwest (photo 2) the Richmond-San Rafael Bridge is still visible and Red Rock Island and the





PHOTO 1: From the project site, looking west across the San Francisco Bay and the Richmond-San Rafael Bridge, with Mount Tamalpais in the background.



PHOTO 3: From the project site, looking north toward Point San Pablo.



PHOTO 2: From the project site, looking southwest at the Richmond-San Rafael Bridge, with Red Rock Island and San Francisco in the background.

San Francisco skyline are observed. From the Historic District on the Project Site looking north, Point San Pablo is visible across the Bay (photo 3).

Views of the Project Site

Figure 4.1-3 includes images of visual resources in the Project Site. Dominant features on the Project Site include Historic District buildings, former Naval industrial buildings from the NFD, and open space. Photo 1 primarily displays open space on the Project Site including tall eucalyptus groves, grasslands, and coastal shrubs. Most existing development lies on the northern portion of the Project Site. In the northern area, features west of Stenmark Drive include three buildings associated with the Historic District (Building Nos. 1, 6, and 10 as shown in photos 2, 3, and 4 respectively), several former Naval buildings, pipelines, wastewater treatment ponds, and an abandoned rail line. Features east of Stenmark Drive in the northern area include 29 cottages associated with the Historic District (photo 4), former Naval buildings, play areas for children, and several roads providing access through the hillside. On the southwest portion of the site is Point Molate Beach Park, which is approximately 18 acres and includes parking, play areas for children, landscaping, paths, and two Quonset huts. The park reopened to the public in 2013. Views of the beach park can be seen in photo 5. A portion of the southern area of the Project Site is a large paved area that was used by the U.S. Navy.

The Project Site is situated between the shoreline of the Bay and Potrero Ridge, which blocks any views of the Project Site from further inland. The Project Site can be seen from various viewpoints across the Bay. **Figure 4.1-4a** provides a key to the locations from which the photos in **Figure 4.1-4b** were taken. Viewpoints A through C are depicted and described on **Figure 4.1-4b**.

- Viewpoint A is a view looking toward the Project Site from a location off San Pedro Road, in the northeastern portion of the City of San Rafael. The Richmond-San Rafael Bridge is visible south of the Project Site.
- Viewpoint B is a view looking toward the Project Site from a point further south than Viewpoint A. East Marin Island and West Marin Island are visible from this view, as is the Richmond-San Rafael Bridge.
- Viewpoint C is a view looking toward the Project Site from a point immediately north of I-580. The Richmond-San Rafael Bridge is visible south of the Project Site.

None of these viewpoints, looking across the Bay toward the Project Site, afford a clear view of the Project Site due to the large distance between the two sides of the Bay. The Project Site is most clearly viewed from the Bay. These views are afforded to commuters on the ferry that runs between San Francisco and Vallejo, as well as to commercial and recreational boaters. **Figure 4.1-5a** and **Figure 4.1-5b** depict views of the Project Site from the ferry. The main Winehaven Building (Building No. 1) is the most prominent feature of these views. Also visible are the pier, the Wine Cellar Building (Building No. 6), the cottages, and other buildings.

Light and Glare

The effect produced by indirect light sources is commonly referred to as “glare.” Daytime glare is typically caused by the reflection of sunlight or artificial light from highly polished surfaces, such as window glass



PHOTO 1: From Point Molate, looking southeast along the shoreline at the southern portion of the project site and the beach park.



PHOTO 2: Winehaven Building 1, looking northeast



PHOTO 3: Building 6, looking east.



PHOTO 4: From top of Building 1, looking east at Building 10 and the cottages.



PHOTO 5: From the beach park, looking north along the shoreline at Point Molate.



PHOTO 6: From southern portion of project site on Stenmark Drive, looking north.



SOURCE: Upstream Point Molate LLC, 2007; GlobeXplorer Aerial Photograph, 2/27/2004;
City of Richmond, 2007; AES, 10/29/2019

Point Molate Mixed-Use Development SEIR / 216544 ■

Figure 4.1-4a
Key to Viewpoint Photos



Viewpoint A

Viewpoint A is a view looking toward the project site from a location off Point San Pedro Road, in the northeastern portion of the City of San Rafael. The Richmond-San Rafael Bridge is visible on the right side of the photograph. The project site, which is not clearly visible, is located toward the center of the photograph. See **Figure 4.1-4a** for the location from which the photograph was taken.



Viewpoint B

Viewpoint B is a view looking toward the project site from a point further south than Viewpoint A. The Richmond-San Rafael Bridge is visible on the right side of the photograph. East Marin Island and a portion of West Marin Island are visible on the left side of the photograph. The project site, which is not clearly visible, is located toward the center of the photograph. See **Figure 4.1-4a** for the location from which the photograph was taken.



Viewpoint C

Viewpoint C is a view looking toward the project site from a point immediately north of Interstate 580 on the western side of the San Francisco Bay. The Richmond-San Rafael Bridge is visible on the right side of the photograph. The project site, which is not clearly visible, is located toward the center of the photograph. See **Figure 4.1-4a** for the location from which the photograph was taken.



Photo 1

Photo 1 was taken from the ferry that runs between San Francisco and Vallejo. It provides a view of the main Winehaven Building (Building No. 1) at the center of the photograph, with the cottages to the left and the Wine Cellar Building (Building No. 6) to the right. The San Francisco Bay is in the foreground, and the forested ridge (Potrero Ridge) along the eastern boundary of the project site is in the background.



Photo 2

Photo 2 is a view of the on-site pier, approaching the project site from the south. The cottages are somewhat visible, just left of the center of the photograph. This is a view afforded to ferry riders traveling from San Francisco to Vallejo.



Photo 3

Photo 3 is another view of the project site from the south. The cottages, partially obscured by trees, are visible at the center of the photograph. To the right of the cottages, parts of Building No.1 and Building No. 6 are visible. This is a view afforded to ferry riders traveling from San Francisco to Vallejo.



Photo 4

Photo 4 is a view of the project site, approaching from the north. Building No. 1 is clearly visible at the center of the photograph, with the cottages to the left and Building No. 6 to the right. This is a view afforded to ferry riders traveling from Vallejo to San Francisco.

or reflective materials. Daytime glare generation is common in urban areas and is typically associated with mid- to high-rise buildings with exterior facades that are largely or entirely comprised of highly reflective glass or mirror-like materials from which the sun can reflect, particularly following sunrise and prior to sunset. Daytime glare generation is typically related to sun angles, although glare resulting from reflected sunlight can occur regularly at certain times of the year. Glare can also be produced during evening and nighttime hours by artificial light directed toward a light-sensitive land use. Typically, this type of nighttime glare results from unshielded light sources or light sources that are directed upward.

The Project Site contains a mix of open space and vacant historic buildings, which do not generate significant amounts of light and glare. Nighttime lighting on the Project Site is primarily generated by security lighting around the historic buildings and street lighting. Night lighting at the Chevron®-Richmond Refinery is substantial and creates an indirect glow even in areas where there is no direct view of the refinery site. As described above, the views of the refinery are blocked by the Potrero hills and vegetation. The Project Site is identified as being within an urbanized area in the 2010 U.S. Census Bureau Urbanized Area Reference Map (U.S. Census Bureau, 2010). Thus, the Project Site is in Lighting Zone 3 as classified in the Title 24 Outdoor Lighting Zones. No significant sources of lighting, shadow, or glare other than the Chevron®-Richmond Refinery are currently present from the surrounding areas.

4.1.3.4 Scenic Vistas, Resources, and Corridors

For the purposes of this Draft Supplemental Environmental Impact Report (SEIR) and specifically analysis within **Impact 4.1.1**, *scenic vistas* (also referred to as *viewpoints*) refer to views from public places that include a wide geographic area that extends into the distance with valued scenic resources. Scenic vistas for this analysis were selected based on the scenic resources identified in the General Plan and the Bay Plan. The City has identified scenic vistas from the existing Beach Park on the Project Site and the Richmond-San Rafael Bridge. These scenic vistas in current conditions along with renderings of what these vistas could resemble after completion of the Modified Project are provided below in **Figures 4.1-6a through Figure 4.1-6d**² and **4.1-7** in **Section 4.1.5**. Views from the water, and from the ferry, looking at the Project Site are included within the analysis of **Impact 4.1.2**, however they are not identified as scenic vistas because those views are fleeting and are not prioritized within the General Plan or the Bay Plan.

The Project Site offers many expansive scenic views of the Bay and partial views of Mount Tamalpais and the San Francisco skyline (see **Figure 4.1-2** above). As detailed above in **Sections 4.1.2.2** and **4.1.2.3**, views of the Bay and its shoreline are considered scenic resources by the Bay Plan and the General Plan. There are no vista points designated by the Bay Plan on or adjacent to the Project Site. However, in general, the Bay Plan indicates that views from waterfront locations should be prioritized (BCDC, 2019). The General Plan goals and policies emphasize the shoreline in the City as a visual resource. Specifically for the Project Site, the General Plan identifies the Winehaven historic buildings, groves of trees, and open space as visual resources.

² The images in **Figure 4.1-6a** through **Figure 4.1-6d** showing the “after” views of the Modified Project reflect one of the possible alternative developments for the site. Where new buildings are shown, they are not intended to establish a commitment to an architectural design or precise location of a building within a Development Area. The size of the Modified Project, boundaries of the Planning Areas, location of the waterfront park, Bay Trail, historic buildings, and Stenmark Drive are fixed elements in the design of the Modified Project.

There are no officially designated state scenic highways located near the Project Site. The nearest highway segment that is eligible for designation is a segment of State Route 101, which is located across the Bay approximately 5 miles west of the Project Site. This highway segment extends from near the City of Marin north toward Leggett, and does not provide a clear view of the Project Site (Caltrans, 2013). Stenmark Drive and the Richmond-San Rafael Bridge are both designated as Scenic Drives in the Bay Plan. The Bay Plan does not identify any guidelines or restrictions for Scenic Drives but indicates that roads with views of the Bay should be prioritized (BCDC, 2019). Stenmark Drive runs adjacent to the western shoreline within the Project Site and through the historic NFD. Portions of Stenmark Drive within the Project Site have obstructed views of the Bay due to vegetation and topography (see **Figure 4.1-7** in **Section 4.1.5**).

4.1.4 2011 FEIR ANALYSIS

This section provides a summary of the impacts to visual conditions analyzed for the Casino Project of the 2011 FEIR, followed by a description of any changes since the 2011 FEIR that relate to visual conditions.

4.1.4.1 2011 FEIR Summary of Impacts

Impacts

The 2011 FEIR evaluated the Casino Project to have potentially significant impacts to scenic vistas because construction of the casino, hotel, commercial facilities, and a parking structure would have been visible from off-site locations; however, these impacts were less than significant after mitigation (e.g., preserving historic buildings and using compatible vegetation to soften views of facilities). The Casino Project would not have impacted scenic resources within State Scenic Highways as the nearest Scenic Highway was 5 miles away and did not offer clear views of the Project Site. Additionally, the 2011 FEIR determined that the Casino Project would result in less-than-significant impacts to visual character or quality after mitigation (e.g., preserving historic buildings and visually compatible building design). There would also have been less-than-significant impacts related to light and glare after incorporating mitigation, such as downcast lighting.

With implementation of mitigation measures such as visually compatible building design, preserving historic buildings, and reducing lighting and glare, the 2011 FEIR determined that the Casino Project would result in less-than-significant impacts related to aesthetic resources.

Alternative F, the No Action Alternative, was determined to have more adverse aesthetic impacts than the Casino Project. Because the Historic District would continue to deteriorate under the No Action Alternative, Alternative F, the No Action Alternative, was found to have a substantial adverse effect on a scenic vista and the potential to substantially degrade the existing visual character or quality of the site and its surroundings. The 2011 FEIR determined that there would be no feasible legally enforceable mitigation that could mitigate these impacts under the No Action Alternative, and thus concluded that the impacts would be significant and unavoidable.

Cumulative Impacts

The 2011 FEIR determined that the Casino Project and cumulative development was consistent with local land use regulations, including associated design guidelines, and was subject to the California Environmental Quality Act (CEQA). Along with mitigation described in the previous section, the Casino Project was determined to have less-than-significant cumulative impacts associated with aesthetic resources.

Two alternatives were found to have more adverse cumulative impacts than the Casino Project. Alternative E in combination with other foreseeable development projects was determined to result a significant impact to the visual character or quality of the site and its surroundings due to the deterioration of the historic buildings. Additionally, Alternative F was determined to result in a cumulatively considerable impact on a scenic vista and visual character or quality of the site and its surroundings due to deterioration of the historic buildings. The 2011 FEIR determined these impacts to be potentially significant.

4.1.4.2 Changes Since the 2011 FEIR

Appendix G of the CEQA Guidelines significance thresholds has changed since 2011 with the Appendix G updates in 2018. The analysis below relies on the updated Appendix G questions concerning aesthetics.

The City adopted a new General Plan in 2012. The General Plan reorganized and rewrote the content related to aesthetics, but the overall objectives have essentially remained the same since the 2011 FEIR with only a few modifications. For instance, the current General Plan now includes more specific guidelines regarding visual resources in parks and shoreline areas.

In addition, at the time of the 2011 FEIR, the beach park was closed; it is now open to the public. No other significant development has occurred in the vicinity of the Casino Project Site. In addition, since the 2011 FEIR, the City approved a mitigated negative declaration and extension of the Bay Trail through the Project Site, which is described in **Section 1.4.4**. The analysis below considers the potential effects of the Modified Project.

None of these changes constitute significant new information that would alter the analysis of the project's aesthetic impacts in the 2011 FEIR.

4.1.5 IMPACTS

4.1.5.1 Thresholds of Significance

Criteria for determining the significance of impacts to visual resources have been developed based on Appendix G of the CEQA Guidelines and relevant agency thresholds. Impacts associated with aesthetics would be considered significant if the Modified Project would:

- have a substantial adverse effect on a scenic vista;

- substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State Scenic Highway;
- conflict with applicable zoning and other regulations governing scenic quality³; or
- create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

4.1.5.2 Method of Analysis

This section identifies impacts to aesthetics that could occur from construction and operation of the Modified Project. The State Scenic Highway Program, Bay Plan, Shoreline Spaces Design Guidelines, General Plan, and the City Zoning Ordinance were reviewed to determine what qualifies as a scenic vista. With these documents in mind, the City specified specific scenic vistas as shown below in **Figure 4.1-6a**. Impacts to aesthetics were analyzed by reviewing maps and photos of these scenic vistas and comparing them to site plans and renderings shown in **Figure 4.1-6b-d**. These renderings were created through three-dimensional computer modeling and reflect one possible development of the Project Site. Where new buildings are shown, they are not intended to establish a commitment to an architectural design or precise location of a building within a Development Area. The size of the Modified Project, boundaries of the Planning Areas, location of the waterfront park, Bay Trail, historic buildings, and Stenmark Drive are fixed elements in the design of the Modified Project.

This analysis focuses on the manner in which development could alter the visual elements or features that exist in or near the Project Site under baseline conditions, which are defined for the purposes of the analysis in this section as physical conditions in the vicinity of the study area on or around the publication of the NOP in July 2019. The building height and appearance is assumed be the same for Option 1 and Option 2 regardless if the development is primarily residential or commercial; thus, for the analysis in this section there is no distinction between the two Options. Where it was concluded that impacts to aesthetics resulting from a Modified Project alternative would exceed the significance thresholds listed below, mitigation measures are identified to reduce impacts to less-than-significant levels.

4.1.5.3 Effects Found Not to be Significant Without Further Analysis

Review and comparison of the existing setting conditions and the Modified Project characteristics with the significance criteria clearly show that no impacts would be associated with the following criterion for the reasons stated below.

The Modified Project would not interfere with scenic resources within a State Scenic Highway.

The nearest highway eligible for designation as a State Scenic Highway (State Route 101) is located 5 miles directly west of the Project Site, across the Bay. The highway does not afford clear views of the

³ This criterion in Appendix G of the *CEQA Guidelines* is conditional, providing different thresholds for urbanized and nonurbanized areas. The Modified Project is within an urbanized area. Therefore, this SEIR analyzes the threshold provided for urbanized areas.

If someone was standing at the beach park looking towards Planning Area A [View 01]

If someone was standing at the beach park looking across the Bay towards Planning Area E [View 02]

If someone was standing on the new bike trail on the Richmond bridge looking towards the site [View 03]





View 1 - Existing



View 1 - After (This view represents one way the Modified Project could look at build out.)



View 2 - Existing



View 2 - After (This view represents one way the Modified Project could look at build out.)



View 3 - Existing



View 3 - After (This view represents one way the Modified Project could look at build out.)

Project Site. Therefore, the Modified Project is not within the view of any State Scenic Highways and further discussion of this issue area is not included within this Draft SEIR.

The Modified Project off-site improvements would not create aesthetic impacts.

All off-site improvements would be constructed underground and thus would not create any aesthetic impacts.

4.1.5.4 Project-Level Impacts

IMPACT 4.1.1	HAVE A SUBSTANTIAL ADVERSE EFFECT ON A SCENIC VISTA
Significance Before Mitigation	Significant
Mitigation Measure	Modified Project Mitigation: MM 4.1-2
Significance After Mitigation	Less than Significant
Comparison with 2011 FEIR	No New or Substantially More Significant Impact with mitigation

As shown in **Figure 4.1-1** and described in **Section 4.1.3** above, the San Pablo Peninsula contains a mixture of undisturbed areas such as open grasslands, as well as developed areas such as the NFD. The Chevron®-Richmond Refinery facilities adjacent to the Project Site can be seen from the Richmond-San Rafael Bridge and create an industrial appearance. The historic buildings within the NFD give the site its historic character. The Project Site and its surroundings are publicly visible from the Beach Park, the Bay Trail, Stenmark Drive, the Richmond-San Rafael Bridge, and from the Bay (i.e., on a ferry or personal boat). As illustrated in **Figures 4.1-6a** through **Figure 4.1-6d**, the Modified Project would alter the views of the shoreline of the Project Site as viewed from these public viewpoints by adding residences and 250,000 square feet of new construction in a multi-story building. **Figures 4.1-6a** through **Figure 4.1-6d** show how the views would change from the Richmond-San Rafael Bridge and from the Beach Park.

As described above in **Section 4.1.3.2**, the Project Site is not visible from further inland due to the topography of Potrero Ridge. Scenic vistas identified by the City include views from the beach park looking out at the Bay towards Point Molate, views from the beach park looking back towards Planning Area A, and views of the Project Site from the Richmond-San Rafael Bridge. The baseline views of these scenic vistas are displayed in **Figures 4.1-6a** through **Figure 4.1-6d** as well as renderings of what development under the Modified Project may look like within the vistas.

Planning Area A would be visible from the Beach Park when facing east and Planning Areas D and E would be primarily visible from the Beach Park when looking out at the Bay (see **Figures 4.1-6b** and **4.1-6c**). These vistas would not be obstructed by the Modified Project, consistency with policies regarding scenic quality at this location are analyzed in **Impact 4.1.2** below.

Viewers on the Richmond-San Rafael Bridge traveling east have a view of the Project Site. However, the viewers are on the bottom portion of the bridge and the view is partially obstructed by the bridge infrastructure. Viewers traveling west have less of an obstructed view, however, the Project Site would be either blocked by Potrero Ridge or behind the viewer for most of the duration of the bridge. A bike and pedestrian path on the Richmond-San Rafael Bridge was opened in November 2019, which offers a view of the Bay and the Project Site (Metropolitan Transportation Commission, 2019). See **Figure 4.1-6d** for a rendering of this view with Modified Project development. The Modified Project development would not obstruct the first view of the Bay, consistent with Bay Plan policy 14 of the Appearance, Design, and Scenic Views section.

Bay views from Stenmark Drive are also considered scenic vistas since Stenmark Drive is designated a scenic drive in the Bay Plan (BCDC, 2019). The Bay Plan also prioritizes “first views” of the Bay. **Figure 4.1-7** illustrates that the first view of the Bay is mostly blocked by vegetation when entering the southern portion of the Project Site via Stenmark Drive. **Figure 4.1-7** shows that the first view of the Bay when entering the northern portion of the site via Stenmark Drive is also mostly blocked by vegetation and a small ridge.


Most of the Modified Project development would occur on the eastern side of Stenmark Drive, which would not impact the views of the Bay. Planning Areas D, E, and H would be to the west of Stenmark Drive. The portion of Stenmark Drive near Planning Areas D, E, and H does not currently have clear views of the Bay due to the existing historic buildings, vegetation, and topography. As shown on **Figure 4.1-7**, Stenmark Drive travels over a hill near Planning Areas D and E and the Bay is barely visible over existing vegetation.


The Modified Project also includes a variant for construction of an on-site wastewater treatment plant (WWTP). Although the WWTP would be visible from Stenmark Drive, the facility would not block views of the Bay, as it is proposed for the eastern side of the road. The WWTP would not be visible from any other scenic vista. The booster pump station for water service would be located on the Bay side of Stenmark Drive. This booster pump station would require roughly 0.5 acres of land and would be located adjacent to the Beach Park, but would not block vista views from the Beach Park. While design details for the booster pump station are not available, the size of typical booster pump stations – often similar to the size of a freestanding multi-car garage – means that the station would be visible from Stenmark Drive, which would create new visual inconsistencies with its surroundings. Thus, **Mitigation Measure 4.1-2** is required to reduce impacts to less-than-significant levels.


Additionally, Viewpoints A, B, and C are scenic vistas due to their unobstructed views of the Bay. As shown in the viewpoint photos in **Figure 4.1-4a** and **Figure 4.1-4b**, the Project Site is barely visible from these locations due to the large distance between them. Thus, development of the Modified Project would not alter these scenic vistas.

There would be no substantial adverse effects to scenic vistas in and around the Project Site and thus no mitigation beyond **Mitigation Measure 4.1-2** would be required.

LEGEND

 Project Site Boundary

 Viewpoints

 Feet
0 380 760



Construction of the Bay Trail

Impacts as a result of the construction and implementation of the Bay Trail are analyzed within the San Francisco Bay Trail at Point Molate Initial Study/Mitigated Negative Declaration (IS/MND), which is incorporated by reference, as described within **Section 1.4.4**. The IS/MND determined that impacts from the construction of the Bay Trail would have a less-than-significant impact on scenic vistas because the Bay Trail would be constructed at the existing grade of the previous railroad corridor and would not include any vertical structures that could alter or block scenic vistas. As a result, construction of the Bay Trail would not result in substantial adverse effects on a scenic vista and the impact would be less than significant.

IMPACT 4.1.2	CONFLICT WITH APPLICABLE ZONING AND OTHER REGULATIONS GOVERNING SCENIC QUALITY
Significance Before Mitigation	Significant
Mitigation Measure	Modified Project Mitigation: MM 4.1-1; MM 4.1-2
Significance After Mitigation	Less than Significant
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

As detailed above, the Project Site is within an urbanized area (U.S. Census Bureau, 2010). Thus, this analysis focuses on the City's General Plan, the City's Zoning Ordinance, and, in the shoreline band, the Bay Plan regarding scenic quality.

The Modified Project includes a proposal to change the General Plan Land Use designations applied to the project site to Low Density Residential, Medium-Intensity Mixed-Use (Community Nodes and Gateways), Parks and Recreation, and Open Space, and to modify the Medium-Intensity Mixed-Use (Community Nodes and Gateways) General Plan land use designation to allow floor area ratio up to 2.5 in the Historic District and heights exceeding 55 ft. per PA District guidelines, as well as to clarify the types of development permitted in the Medium-Intensity Mixed-Use land use designation with an approved PA District. In addition, the Modified Project proposes to change the description of Change Area 13 such that the Modified Project would be consistent with it.

The Low Density Residential designation allows attached and detached single-family residential development in level to moderately sloped areas with neighborhood mixed-use development allowed at neighborhood nodes. Maximum building height in this land use designation is 35 ft. The Medium-Intensity Mixed-Use (Community Nodes and Gateways) designation allows for mid-rise mixed-use development at key community nodes and gateways. Buildings within this land use designation must be between 15 and 55 ft. tall (City of Richmond, 2012), although the Modified Project could include heights potentially above 55 feet, low-rise development, and commercial-only or residential-only buildings per the PA District to be adopted. The Parks and Recreation and Open Space designations would not allow residential development. Parks and Recreation allows for small-scale recreation supporting uses such as rental

shops, bike repair, small restaurants, and museums, with building heights up to 35 ft. Utilities are allowed within the Open Space designation (City of Richmond, 2012), and while the General Plan does not specifically identify utilities as allowed in the Parks and Recreation land use designation, it does not prohibit them, and the corresponding zoning district, Parks and Recreation does allow major and minor utilities, minor utilities by right, and major utilities with a conditional use permit.

Under the Modified Project, residential development within the Low Density Residential areas would be three stories or less. Proposed development within the Medium-Intensity Mixed-Use (Community Nodes and Gateways) Areas would be five stories or less. Structures within the Parks and Recreation and Open Space Land Use Designations would be limited to those associated with recreational uses as described in **Section 3.4.4** (e.g., picnic areas, restroom facilities, and interpretive center) and utilities (e.g., proposed water tanks, booster pump station, and WWTP under Wastewater Treatment Variant A). More details about these proposed land use designations can be found in **Section 4.9**, Land Use. Ultimately, the Modified Project would be consistent with the proposed General Plan height and intensity/density restrictions and the PA District, which acts as the Modified Project's zoning.

Additionally, the Modified Project aligns with the guidelines in the General Plan for development of the Project Site. General Plan Policy ED1.7 describes how waterfront within the City should be developed to attract new residential and commercial development, which the Modified Project would accomplish by incorporating mixed-use residential development. Specifically, Policy LU3.3 states that Point Molate should be developed with tourist-serving amenities; the proposed retail, restaurants, and Bay Trail could accommodate and attract tourists. The Modified Project development would not be consistent with the General Plan recommendation for new development within the NFD area to be kept small-scale to reinforce the rural village character of the area, but as discussed above, the Modified Project proposes to amend this language in part because the existing Project Site has an industrial character, having been formerly a wine distribution and warehouse facility and then a NFD. If the Modified Project is approved, it would be consistent with the General Plan's vision for the Project Site. Further, the development would take advantage of the waterfront views consistent with the other General Plan policies and would maintain the northeastern portion of the Project Site as open space. Additionally, the historic buildings on the Project Site would be rehabilitated in compliance with the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings and design guidelines approved by the City, as detailed in **Section 4.4**.

As described in **Section 3.4.6.2**, the Modified Project includes an option for on-site water treatment facilities (Wastewater Treatment Variant A). The optional WWTP and 40 underground storage tanks would require approximately 2 acres of land on the eastern side of Stenmark Drive at the southern boundary of the Project Site. The underground tanks would be buried below-grade, with approximately 5 ft. of cover that would be graded at a 2:1 slope for slope stability and landscaped with vegetative groundcovers. The optional WWTP may include aeration chambers, have a height of approximately 15 ft., look industrial in nature, and would be fenced by fencing at least as tall as the structures. This is a potentially significant impact because General Plan Policy CF1.3 requires that aesthetic impacts of siting new infrastructure and utilities be considered. **Mitigation Measure 4.1-1** includes techniques for screening water and wastewater infrastructure from Stenmark Drive using fencing and trees and other vegetation, as well as paint to address aesthetic considerations.

The East Bay Municipal Utilities District (EBMUD) requires construction of two twin water tanks, each with a volume of 0.5 million gallons per day, which would require roughly 1 acre of land. The tanks would be located near the top of Potrero Ridge, behind Planning Area B. The two aboveground tanks would be painted EBMUD's standard green color, Federal Color Number FS-14159 to blend into the hillside and minimize aesthetic impacts. The tanks would be surrounded by EBMUD's standard 8-ft. black vinyl coated security chain link fencing with barbed wire at the top. These design elements would reduce the visual impacts of the water tanks to a less-than-significant level and would make the tanks consistent with General Plan Policy CF1.3.

Additionally, a booster pump station would be required to pump water to the twin tanks. This booster pump station would require roughly 0.5 acres of land and would be located adjacent to the Beach Park. The booster pump station would be located in the Parks and Recreation General Plan Land Use Designation. While design details for the booster pump station are not available, the size of typical booster pump stations – often similar to the size of a freestanding multi-car garage – means that the station would be visible and be inconsistent with its surroundings. Thus, **Mitigation Measure 4.1-2** is required to ensure the station is consistent with General Plan Policy CF1.3 and reduce impacts to less-than-significant levels.

Please see **Appendix L** for a full analysis of the Modified Project's consistency with General Plan policies related to aesthetics. As described in **Appendix L**, the Modified Project, with implementation of **Mitigation Measures 4.1-1** and **4.1-2**, is consistent with all aesthetic-related policies. Further, as the Modified Project includes an application for rezoning to a PA District, the project design is subject to a design-level review by the City Design Review Board. Construction, alterations, and modifications within the Historic District also are subject to design-level review by the Historic Preservation Commission. Approval of the application by the City requires that the City find that the Modified Project is consistent with the General Plan, surrounding land uses, and applicable design guidelines (see **Section 4.1.2.4** above).

As discussed above, Stenmark Drive and the Richmond-San Rafael Bridge are both designated by the Bay Plan as Scenic Drives. The Bay Plan does not specify what should be preserved along Scenic Drives but provides many policies regarding scenic views as described above in **Section 4.1.2**. Specifically, Bay Plan Policy No. 8 mentions that shoreline developments should be built in clusters and Policy No. 14 indicates that views from vista points and roads should be maintained by restricting height and incorporating landscaping. The Modified Project does not propose new structures within the shoreline band. Structures to the shoreline-side of Stenmark Drive would comply with these policies in that development would occur in clusters to preserve views of the Bay where views exist and landscape would be incorporated around new development.. For a full analysis of the Project's consistency with the Bay Plan, including all policies related to aesthetics, see **Appendix O**.

An analysis of consistency with the zoning provisions in Article 15.04.604 is included in **Section 4.1.2.4**, and consistency with § 15.04.608.030.D.b, which prohibits uplighting in bird collision zones is discussed in **Section 4.3**. The Modified Project would be designed to meet the General Site Regulations contained in Article 15.04.601 of the Zoning Ordinance.

Because the Modified Project would not conflict with zoning and applicable plan policies related to aesthetics with mitigation, impacts would be less than significant with **Mitigation Measures 4.1-1** and **4.1-2**.

Construction of the Bay Trail

Impacts as a result of the construction and implementation of the Bay Trail are analyzed within the Bay Trail IS/MND, which is incorporated by reference, as described within **Section 1.4.4**. The IS/MND determined that impacts from the construction of the Bay Trail substantially degrading the existing visual character or quality of public views of the Project Site and its surroundings were less than significant because the Trail would be constructed at the existing grade of the previous railroad corridor and would not include any vertical structures that could alter or block existing views. As a result, construction of the Bay Trail would not result in substantially degrading the existing visual character or quality of public views of the Project Site and its surroundings and the impact would be less than significant.

IMPACT 4.1.3	CREATE A NEW SOURCE OF LIGHT OR GLARE
Significance Before Mitigation	Less Than Significant
Mitigation Measure	None Required
Significance After Mitigation	Not Applicable
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

For the Modified Project development, lighting would be required outside the residences, commercial development, and along Stenmark Drive for safety purposes. This would introduce a new potential source of light and glare to the Project Site, especially during the nighttime. However, there is already security lighting on the Project Site and the site is classified as an Urban Area (Zone 3) under the State Title 24 Building Efficiency Standards since the City is largely developed. The Modified Project would comply with the Title 24 Standards that are intended to reduce lighting and glare and ensure consistency with the surrounding areas. The Modified Project is required to submit a lighting plan for the PA District, which would become part of the adopted PA. This lighting plan would be required to be consistent with City Zoning Code Lighting Zone requirements for the proposed residential and commercial land uses, including shielding and staying within required lighting output; thus, lighting would not spill over into adjacent parcels. With adherence to the Title 24 Standards, the Richmond Zoning Code, and City approval of the lighting plan, a less-than-significant impact regarding lighting and glare would occur.

Construction of the Bay Trail

Impacts as a result of the construction and implementation of the Bay Trail are analyzed within the San Francisco Bay Trail at Point Molate IS/MND, which is incorporated by reference, as described within **Section 1.4.4**. The IS/MND determined that impacts from the construction of the Bay Trail in regards to creating a new source of substantial light or glare were less than significant because construction of the

trail would occur during daylight hours, thus no lighting is necessary. Additionally, no lighting would be implemented on the trail for operational use. As a result, construction of the Bay Trail would not result in creating a new source of substantial light or glare and the impact is less than significant.

4.1.5.5 Cumulative Impacts

IMPACT 4.1.4	CUMULATIVE AESTHETIC IMPACTS
Significance Before Mitigation	Less Than Significant
Mitigation Measures	None Required
Significance After Mitigation	Not Applicable
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

A cumulative aesthetic analysis typically focuses on other projects that are visible from where the Project Site is also visible. As described above, due to topography, the Project Site is only visible from the Richmond-San Rafael Bridge, from boats on the Bay, and from the Point Molate Beach Park. When viewing the Project Site from these locations, it is difficult to see areas outside of the San Pablo Peninsula. Therefore, this cumulative analysis focuses primarily on the San Pablo Peninsula. The only other project proposed on the San Pablo Peninsula is the Bay Trail. A Final Mitigated Negative Declaration was recently prepared for this project (NCE, 2018). The study by NCE found that the Bay Trail project would not introduce visual elements that are inconsistent with the existing visual character of the site as no vertical structures other than fencing and a gate are proposed. More detail regarding cumulative projects is found in **Section 5.4**. The City of Richmond on the other side of the Potrero Ridge is heavily developed (see **Figure 4.1-1**) and thus the addition of other developments would not alter the visual character of the region. The General Plan Update Environmental Impact Report (EIR) concluded that the General Plan would result in significant and unavoidable impacts to scenic vistas and visual character due to infill development in the downtown area, development into the hillsides in the eastern portion of the City, and alteration of the skyline. The Modified Project would not contribute to this significant cumulative impact, as the downtown area and eastern Richmond hills are not visible when viewing the Project Site. Additionally, the Modified Project would not alter the skyline of downtown Richmond. For these reasons, the Modified Project would not make a cumulatively considerable contribution to the significant cumulative visual impacts identified in the General Plan Update EIR.

4.1.6 MITIGATION MEASURES

Review of the mitigation measures identified in the 2011 FEIR determined that some measures required revisions or were not applicable to the Modified Project. It was determined that several of the mitigation measures that were identified in the 2011 FEIR are no longer applicable in regards to aesthetics for the Modified Project. **Appendix K** provides a summary of whether each mitigation measure from the 2011 FEIR was revised, deleted, or kept as is and the reasoning for that determination.

MM 4.1-1 Wastewater Treatment Plant Screening

All wastewater infrastructure shall be screened using vegetation, such as trees and shrubs, and fencing. Vegetation must be selected so that screening is achieved at least 12 inches above infrastructure at full growth and fully cover fencing. Facilities and fencing shall be painted on all sides to blend into vegetation. Example colors include EBMUD's standard green color, Federal Color Number FS-14159.

MM 4.1-2 Booster Pump Station Aesthetic Treatment

The booster pump station shall be housed in a structure that is consistent in design with the design guidelines for the Modified Project. The structure shall be designed to appear similar to other nearby structures, including non-residential or residential structures, whichever is located nearest to the booster pump station.

4.2 AIR QUALITY AND GREENHOUSE GAS EMISSIONS

4.2.1 INTRODUCTION

This section provides a description of air quality conditions in the vicinity of the Point Molate Mixed-Use Development Project (Modified Project) and describes the changes to those conditions that would result from implementation of the Modified Project. In addition, greenhouse gas (GHG) emissions are also addressed in this section because the methodology and modeling for determining emissions are similar and the *Final Environmental Impact Report for the Point Molate Mixed-Use Tribal Destination Resort and Casino Project* (2011 FEIR) considered air quality and GHG impacts in the same chapter. Following an overview of the relevant regulatory setting in **Section 4.2.2** and the air quality and GHG emissions resource setting in **Section 4.2.3**, Modified Project-related impacts and identified mitigation measures are presented in **Section 4.2.5** and **Section 4.2.6**, respectively. The air quality and GHG emissions impacts associated with the Casino Project and analyzed as Alternative A in the 2011 FEIR are also summarized in **Section 4.2.4** and compared to the impacts of the Modified Project.

4.2.2 REGULATORY SETTING

4.2.2.1 Criteria Pollutants

Federal

The federal Clean Air Act (CAA) was enacted for the purposes of protecting and enhancing the quality of the national air resources to benefit public health, welfare, and productivity (U.S. Environmental Protection Agency [USEPA], 2007).

In 1971, the USEPA developed primary and secondary National Ambient Air Quality Standards (NAAQS). Six pollutants of primary concern were designated: carbon monoxide (CO), ozone (O₃), suspended particulate matter (particulate matter 10 microns in size [PM₁₀] and particulate matter 2.5 microns in size [PM_{2.5}]), sulfur dioxide (SO₂), nitrogen dioxide (NO₂), and lead (Pb). The primary NAAQS must “protect the public health with an adequate margin of safety” and the secondary standards must “protect the public welfare from known or anticipated adverse effects (aesthetics, crops, architecture, etc.)” (USEPA, 2007). The primary standards were established, with a margin of safety, considering long-term exposures for the most sensitive groups in the general population. The USEPA allows states the option to develop different (stricter) standards. California elected this option and adopted standards that are generally more stringent.

If an air basin is not in federal attainment (i.e., does not meet federal standards) for a particular pollutant, the basin is classified as a marginal, moderate, serious, severe, or extreme nonattainment area. Nonattainment areas must take steps towards attainment by a specific timeline. These steps include establishing a transportation control program and clean-fuel vehicle program, decreasing the emissions threshold for new stationary sources and for major sources, and increasing the stationary source emission offset ratio to at least 1.3:1. The above programs are published in the State Implementation Plan (SIP) that must be approved by the USEPA.

The SIP is a number of documents that set forth strategies for achieving federal air quality standards in California. The Code of Federal Regulations (CFR; CFR Title 40, Chapter I, Part 52, Subpart F, § 52.220)

lists all of the items that are included in the California SIP. The SIP is not a single document, but a compilation of new and previously submitted plans, programs (e.g., monitoring, modeling, permitting), district rules, state regulations, and federal controls. The SIP applicable to the Modified Project is described below.

Ambient Air Quality Standards

Criteria air pollutants (CAP) are common pollutants that have been identified as being potentially detrimental to human health. CAPs are used as indicators of regional air quality. The USEPA has designated six CAPs: O₃, CO, particulate matter (PM₁₀ and PM_{2.5}), NO₂, SO₂, and Pb.

The CAA established maximum ambient concentrations for six CAPs, known as the NAAQS. Concentrations above these time-averaged limits are anticipated to cause adverse health effects to sensitive receptors. The CAA also established primary and secondary NAAQS. Primary standards set limits to protect public health, while secondary standards set limits to protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings. For some of the CAPs, more than one time-averaging standard has been identified to address typical exposures found in the environment. Refer to **Table 4.2-1** for the violation criteria for the various averaging times for each CAP.

The USEPA and the California Air Resources Board (CARB) identify areas throughout the United States and California, respectively, that meet the NAAQS or California Ambient Air Quality Standards (CAAQS), and are labeled as either attainment or unclassifiable. Areas that do not meet the NAAQS or CAAQS are labeled as nonattainment. A designation of maintenance can exist under NAAQS and CAAQS, which indicates that an area has met its attainment goals but has not yet applied for attainment designation.

The USEPA further classifies nonattainment areas according to the level of pollution in each area for O₃ and PM₁₀, but not for PM_{2.5}. For O₃, there are five classes of nonattainment areas: marginal (recently became compliant with the NAAQS), moderate (relatively easy to obtain levels below the NAAQS), serious (difficult to reach levels below NAAQS), severe (difficult to reach levels below NAAQS), and extreme (difficult to reach levels below NAAQS). The CAA uses the USEPA classification system to design cleanup requirements appropriate for the severity of the pollution and to set realistic deadlines for reaching cleanup goals. Attainment and nonattainment areas are identified through monitoring. Unclassified designations have not been monitored for the particular designated CAP and are assumed to be in attainment. States, municipal statistical areas, air basins, and counties that contain areas of nonattainment are required to develop a SIP that outlines policies and procedures designed to bring the nonattainment area into compliance with the NAAQS.

National Emissions Standards for Hazardous Air Pollutants

Asbestos is considered a Hazardous Air Pollutant (HAP) and therefore, emissions are regulated under the National Emissions Standards for Hazardous Air Pollutants (NESHAP). The USEPA revised the asbestos NESHAP regulations on November 20, 1990; this revision was specific to demolition practices.

TABLE 4.2-1
AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	Standard (parts per million)		Standard (microgram per cubic meter)		Violation Criteria	
		CAAQS	NAAQS	CAAQS	NAAQS	CAAQS	NAAQS
O ₃	1 hour	0.09	N/A	180	N/A	If exceeded	N/A
	8 hours	0.070	0.070	137	137	N/A	If exceeded on more than 3 days in 3 years
CO	8 hours	9	9	10,000	10,000	If exceeded	If exceeded on more than 1 day per year
	1 hour	20	35	23,000	40,000	If exceeded	If exceeded on more than 1 day per year
NO ₂	Annual arithmetic mean	0.030	0.053	57	100	N/A	If exceeded
	1 hour	0.18	0.100	470	188	If exceeded	N/A
SO ₂	Annual arithmetic mean	N/A	0.030	N/A	N/A	N/A	If exceeded
	24 hours	0.04	0.14	105	N/A	If exceeded	If exceeded on more than 1 day per year
	1 hour (primary)	0.25	0.075	655	196	N/A	N/A
	3 hours (secondary)	N/A	0.5	N/A	N/A		If exceeded on more than 1 day per year
PM ₁₀	Annual arithmetic mean	N/A	N/A	20	N/A	If exceeded	If exceeded
	24 hours	N/A	N/A	50	150	If exceeded	If exceeded on more than 1 day per year
PM _{2.5}	Annual arithmetic mean (primary)	N/A	N/A	12	12	If exceeded	If exceeded
	Annual arithmetic mean (secondary)	N/A	N/A	N/A	15	If exceeded	If exceeded
	24 hours	N/A	N/A	N/A	35	If exceeded	If exceeded on more than 1 day per year
Pb	30 day Average	N/A	N/A	1.5	N/A	If equaled or exceeded	N/A
	Rolling 3-month Average	N/A	N/A	N/A	0.15	N/A	If exceeded

Note: CAAQS = California Ambient Air Quality Standards
Source: California Air Resources Board, 2016a.

Asbestos is the name given to a number of naturally occurring fibrous silicate minerals that have been mined for their useful properties such as thermal insulation, chemical and thermal stability, and high tensile strength. Asbestos is made up of microscopic bundles of fibers that can become airborne when

distributed. These fibers enter the air where the potential for inhalation exists. Once in the lungs, the fibers can cause significant health problems including cancer and scarring of the lungs. Asbestos is not always an immediate hazard. In fact, if asbestos can be maintained in good condition, it is recommended that it be undisturbed and periodic surveillance be performed to monitor its condition. It is only when asbestos-containing materials (ACM) are disturbed or the materials become damaged that it becomes a hazard. When the materials become damaged, the fibers separate and may become airborne.

The demolition, renovation, or removal of ACM is subject to the requirements of the NESHAP regulations as listed in 40 CFR Part 61, Subpart M, requiring notification and inspection. The appropriate regulatory agency must be notified before any demolition takes place, even if no asbestos exists at the site. All demolitions and renovations are also subject to the asbestos NESHAP regulation that requires all owners and operators to determine if and how much asbestos is present at a site.

Asbestos NESHAP regulations must be followed for demolitions of facilities with at least 80 linear meters (260 linear feet [ft.]) of regulated asbestos-containing materials (RACM) on pipes, at least 15 square meters (160 square ft.) of RACM on other facility components, or at least 1 cubic meter (35 cubic ft.) of facility components where the amount of RACM previously removed from pipes and other facility components could not be measured before stripping. The NESHAP regulations require certain scheduling, handling, and disposal methods intended to minimize asbestos emissions. The NESHAP regulations cover demolition and renovation projects and require that the owner/operator thoroughly inspect the facility for asbestos prior to the start of demolition or renovation and require that all RACM be properly removed prior to the start of demolition or renovation. All individuals who inspect for asbestos develop management plans and conduct abatement work must be certified per the Asbestos Hazard Emergency Response Act.

State

In 1988, the California legislature adopted the California Clean Air Act (CCAA) that established a statewide air pollution control program. CCAA requirements include annual emission reductions, development and use of low emission vehicles, establishment of the CAAQS, and submittal of air quality attainment plans by air districts. CARB is the state agency responsible for coordinating both state and federal air pollution control programs in California. The California SIP is comprised of efforts by the State to attain the NAAQS as well as plans developed at the regional or local level. Local air pollution control districts address attainment and maintenance of CAAQS as mandated by the CCAA.

The CCAA establishes maximum concentrations for the six CAPs, as well as four other air pollutants in California, that are known collectively as the CAAQS. Concentrations that exceed these time-averaged limits are anticipated to cause adverse health effects to sensitive receptors. CARB is part of the California Environmental Protection Agency (Cal/EPA) and has jurisdiction over local air districts. CARB has established violation criteria for each CAP. For example, in order to constitute a violation of the CAAQS, O₃ must be exceeded on one day in any given year. Refer to **Table 4.2-1** for the violation criteria for the various averaging times for each CAP.

State Implementation Plans

Nonattainment areas must take steps towards attainment by a specific timeline. These steps are consolidated within the SIP as mandated by the CAA. The SIP sets forth a strategy for achieving federal air quality standards in the State. The SIP is not a single document, but a compilation of new and previously submitted plans, programs (e.g., monitoring, modeling, permitting), district rules, state regulations, and federal controls. All of the documents included in the SIP are published in the CFR. The Bay Area Air Quality Management District (BAAQMD) has adopted an attainment plan or SIP for O₃, which is designated as nonattainment. The applicable SIP for O₃ in the San Francisco Bay Area Air Basin (SFBAAB) is the *Revised San Francisco Bay Area Ozone Attainment Plan for 1-hour National Ozone Standard* (BAAQMD, 2001).

Many documents that constitute the California SIP detail control strategies, including emission standards for cars and heavy trucks, fuel regulations, and limits on emissions from consumer products. Local air districts and other agencies, such as the Bureau of Automotive Repair, prepare SIP elements and submit them to CARB for review and approval. California law identifies CARB as the Lead Agency for all purposes related to the SIP.

Sierra Club v. County of Fresno

EIRs prepared pursuant to CEQA have long evaluated project-related impacts of toxic air contaminants, such as diesel particulate matter (DPM), through quantitative and/or qualitative means relative to air district-issued thresholds of significance. However, EIRs historically have not evaluated the specific health effects of project-related increases in CAPs, other than to note and summarize scientific literature regarding the general effect of those pollutants on health. Instead, in accordance with air district-issued thresholds of significance and industry standard practice, CEQA analysis has always focused on estimating project-related emissions totals for CAPs and, in certain cases, conducting dispersion modelling to assess impacts on local ambient air quality concentrations.

In December 2018, the California Supreme Court issued its decision in *Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502 (“*Friant Ranch*”). In finding the EIR inadequate in its analysis of CAPs, including NO_x and particulate matter, the Court held that the EIR should have “relate[d] the expected adverse air quality impacts to likely health consequences or explain[ed] in meaningful detail why it is not feasible at the time of drafting to provide such an analysis, so that the public may make informed decisions regarding the costs and benefits of” the project. (*Id.* at p. 510.) Accordingly, it is generally accepted that this case requires some analysis of the health impacts of CAP emissions where the impacts of those emissions are found to be significant.

Local***Bay Area Air Quality Management District 2017 Clean Air Plan***

The 2017 Clean Air Plan for the San Francisco Bay Area (Bay Area) is prepared with the cooperation of the BAAQMD, the Metropolitan Transportation Commission (MTC), and the Association of Bay Area Governments (ABAG). On April 19, 2017, the BAAQMD adopted the most recent revision to the Clean Air Plan, the Bay Area 2017 Clean Air Plan (BAAQMD, 2017a). The Bay Area 2017 Clean Air Plan serves to:

- update the most recent Bay Area ozone plan, the 2010 Clean Air Plan, pursuant to air quality planning requirements defined in the California Health & Safety Code;
- include all feasible measures to reduce emissions of ozone precursors (reactive organic gas [ROG] and NO_x) and reduce transport of ozone and its precursors to neighboring air basins; and
- build upon and enhance the BAAQMD's efforts to reduce emissions of fine particulate matter and toxic air contaminants.

The Bay Area 2017 Clean Air Plan includes a wide range of proposed “control measures,” or actions to reduce combustion-related activities, decrease fossil fuel combustion, improve energy efficiency, and decrease emissions of potent GHGs. Numerous measures reduce multiple pollutants simultaneously: for example, O₃, particulate matter, air toxics, and GHGs. Others focus on a single type of pollutant, such as “super GHGs” – defined as those GHGs with very high global warming potential such as methane – or are progressive actions to remove harmful particles in the air (BAAQMD, 2017a).

BAAQMD Rules and Regulations

The BAAQMD is the regional agency responsible for rulemaking, permitting, and enforcement activities affecting stationary sources in the Bay Area. BAAQMD does not have authority to regulate emissions from motor vehicles. Specific rules and regulations adopted by the BAAQMD limit the emissions that can be generated by various stationary sources, and identify specific pollution reduction measures that must be implemented in association with various activities. These rules regulate not only emissions of the six CAPs; toxic air contaminant (TAC) emissions sources subject to these rules are also regulated through the BAAQMD's permitting process and standards of operation. Through this permitting process, including an annual permit review, the BAAQMD monitors generation of stationary emissions and uses this information in developing its air quality plans. Any sources of stationary emissions constructed as part of the Modified Project would be subject to BAAQMD Rules and Regulations. Both federal and State ozone plans rely heavily upon stationary source control measures set forth in BAAQMD's Rules and Regulations.

With respect to construction activities associated with the development Modified Project, applicable BAAQMD regulations would relate to portable equipment (e.g., concrete batch plants, and gasoline- or diesel-powered stationary engines used for power generation, pumps, compressors, pile drivers, and cranes), architectural coatings, and paving materials. Equipment used during project construction would be subject to the requirements of BAAQMD Regulation 2 (Permits); Rule 1 (General Requirements) with respect to portable equipment unless exempt under Rule 2-1-105 (Exemption, Registered State-wide Portable Equipment); Regulation 2 Rule 5 (New Source Review of Toxic Air Contaminants); Regulation 8 (Organic Compounds), Rule 3 (Architectural Coatings); and Regulation 8 (Organic Compounds), Rule 15 (Emulsified and Liquid Asphalts). In addition, the BAAQMD regulates the demolition of buildings or structures that may contain asbestos through Regulation 11 (Hazardous Pollutants), Rule 2 (Asbestos Demolition, Renovation, and Manufacturing).

BAAQMD CEQA Guidelines

On June 2, 2010, the BAAQMD Board of Directors unanimously adopted thresholds of significance to assist in the review of projects under CEQA. These thresholds are designed to establish the level at which the BAAQMD believed air pollution emissions would cause significant environmental impacts under

CEQA. The current BAAQMD CEQA guidelines were approved and adopted in May 2017. While the BAAQMD is currently working on updating the CEQA guidelines and thresholds of significance, no drafts have been released and therefore the 2017 version of the guidelines are the most recent available. Refer to **Table 4.2-2** for a summary of BAAQMD Air Quality CEQA Thresholds.

TABLE 4.2-2
AIR QUALITY CEQA THRESHOLDS OF SIGNIFICANCE

Pollutant	Construction-Related	Operations-Related	
Criteria Air Pollutants and Precursors (Regional)	Average Daily Emissions (lb/day)	Average Daily Emissions (lb/day)	Maximum Annual Emissions (tpy)
ROG	54	54	10
NO _x	54	54	10
PM ₁₀	82 (exhaust)	82	15
PM _{2.5}	54 (exhaust)	54	10
PM ₁₀ /PM _{2.5} (fugitive dust)	Best Management Practices	None	
Local CO	None	9.0 ppm (8-hour average), 20.0 ppm (1-hour average)	
Risk and Hazards for new sources and receptors (Individual Project)	Same as Operational Thresholds	Compliance with Qualified Community Risk Reduction Plan OR Increased cancer risk of >10.0 in a million Increased non-cancer risk of > 1.0 Hazard Index (Chronic or Acute) Ambient PM _{2.5} increase: > 0.3 µg/m ³ annual average <u>Zone of Influence</u> : 1,000-foot radius from property line of source or receptor	
Risk and Hazards for new sources and receptors (Cumulative Threshold)	Same as Operational Thresholds	Compliance with Qualified Community Risk Reduction Plan OR Cancer: > 100 in a million (from all local sources) Non-cancer: > 10.0 Hazard Index (from all local sources) (Chronic) PM _{2.5} : > 0.8 µg/m ³ annual average (from all local sources) <u>Zone of Influence</u> : 1,000-foot radius from property line of source or receptor	
Accidental Release of Acutely Hazardous Air Pollutants*	None	Storage or use of acutely hazardous materials locating near receptors or new receptors locating near stored or used acutely hazardous materials considered significant	
Odors	None	5 confirmed complaints per year averaged over three years	
Note: CO ₂ e = carbon dioxide equivalent lb/day = pounds per day SP = service population MT = metric ton ppm = parts per million tpy = tons per year µg/m ³ = micrograms per cubic meter Source: BAAQMD, 2017b.			

City of Richmond General Plan

On April 25, 2012, the City of Richmond (City) Council adopted the General Plan 2030 (General Plan) to guide the City's sustainable growth and development. The Conservation, Natural Resources, and Open Space Element of the General Plan includes the following goals and policies related to air quality.

GOAL CN-4: Improved Air Quality. Take steps to improve and maintain air quality for the benefit [of] the health and vitality of residents and the local economy. In alignment with state emission reduction goals and in cooperation with the BAAQMD, pursue regional collaboration to reduce emissions from all sources.

Policy CN-4.1 Air Quality. Support regional policies and efforts that improve air quality to protect human and environmental health and minimize disproportionate impacts on sensitive population groups. Work with businesses and industry, residents, and regulatory agencies to reduce the impact of direct, indirect, and cumulative impacts of stationary and non-stationary sources of pollution such as industry, the Port, railroads, diesel trucks, and busy roadways. Fully utilize the City's police power to regulate industrial and commercial emissions. Ensure that sensitive uses such as schools, childcare centers, parks and playgrounds, housing, and community gathering places are protected from adverse impacts of emissions.

Continue to work with stakeholders to reduce impacts associated with air quality on disadvantaged neighborhoods and continue to participate in regional planning efforts with nearby jurisdictions and the BAAQMD to meet or exceed air quality standards. Support regional, state, and federal efforts to enforce existing pollution control laws and strengthen regulations.

City of Richmond Municipal Code

Section 15.04.608.070 of the City of Richmond Municipal Code states the following.

No continuous, frequent, or repetitive odors are permitted that exceed limits established by the BAAQMD, CARB, or federal agencies. An odor detected no more than a total of 15 minutes in any one day shall not be deemed to be continuous, frequent, or repetitive for this regulation. No dust or particulate matter shall be emitted that exceeds limits established by the BAAQMD, the CARB, or federal agencies. Exhaust air ducts shall be located or directed away from abutting residentially-zoned properties.

4.2.2.2 Greenhouse Gas Emissions***Federal******Energy and Independence Security Act of 2007***

Signed into law in December 2007, this broad energy bill included an increase in auto mileage standards, and also addressed biofuels, conservation measures, and building efficiency. The USEPA administers the Corporate Average Fuel Economy (CAFE) program, which determines compliance by vehicle

manufacturers with existing fuel economy standards. The Energy and Independence Security Act amended the CAFE standards to mandate significant improvements in fuel efficiency (e.g., average fleet-wide fuel economy of 35 miles per gallon [mpg] by 2020, versus the previous standard of 27.5 mpg for passenger cars and 22.2 mpg for light trucks).

Another provision of the Energy and Independence Security Act is a mandate to increase use of ethanol and other renewable fuels by 36 billion gallons by 2022; 21 billion of the 36 billion gallons is to include advanced biofuels, largely cellulosic ethanol, that have 50 to 60 percent lower GHG emissions. The Bill also includes establishment of a new energy block grant program for use by local governments in implementing energy-efficiency initiatives, as well as a variety of green building incentives and programs, among other things.

In 2010, President Obama issued a memorandum directing the Department of Transportation, Department of Energy, USEPA, and the National Highway Traffic Safety Administration (NHTSA) to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, the USEPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017–2025 light-duty vehicles. The proposed standards projected to achieve 163 grams per mile of CO₂ by model year 2025, on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon if this level were achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017–2021 (77 Federal Register [FR] 62624–63200). On April 2, 2018, the USEPA Administrator signed the Mid-Term Evaluation Final Determination, which found that the model year 2022–2025 GHG standards are not appropriate in light of the record before the USEPA and, therefore, should be revised (USEPA, 2018).

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011, the USEPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014–2018 (76 FR 57106–57513). The standards for CO₂ emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the USEPA, this regulatory program will reduce GHG emissions and fuel consumption for the affected vehicles by 6 percent to 23 percent over the 2010 baselines.

In August 2016, the USEPA and NHTSA announced the adoption of the phase two program related to the fuel economy and GHG standards for medium- and heavy-duty trucks. The phase two program will apply to vehicles with model years 2018 through 2027 for certain trailers, and model years 2021 through 2027 for semi-trucks, large pickup trucks, vans, and all types of buses and work trucks. The final standards are expected to lower CO₂ emissions by approximately 1.1 billion MT and reduce oil consumption by up to 2 billion barrels over the lifetime of the vehicles sold under the program (USEPA, 2016a).

President Trump and the USEPA have stated their intent to halt various federal regulatory activities to reduce GHG emissions. California and other states have stated their intent to challenge federal actions that would delay or eliminate GHG reduction measures, and have committed to cooperating with other countries to implement global climate change initiatives. The timing and consequences of these types of federal decisions and potential responses from California and other states are speculative at this time.

State

The climate change strategy for California is multifaceted and involves a number of State agencies implementing a variety of laws and policies, as well as broad goals set by governors. Below is a summary of these goals, laws, and policies.

Assembly Bill 1493

Signed by the California Governor in 2002, Assembly Bill (AB) 1493 requires CARB to adopt regulations requiring a reduction in GHG emissions emitted by cars in the state. AB 1493 is intended to apply to 2009 and later vehicles. On June 30, 2009, the USEPA granted a CAA waiver that California needed to implement AB 1493.

Executive Order S-3-05

Executive Order (EO) S-3-05 was signed by the California Governor on June 1, 2005. EO S-3-05 established the following statewide emission reduction targets.

- Reduce GHG emissions to 2000 levels by 2010.
- Reduce GHG emissions to 1990 levels by 2020.
- Reduce GHG emissions to 80 percent below 1990 levels by 2050.

EO S-3-05 created a Climate Action Team (CAT) headed by the Cal/EPA that included several other State agencies. The CAT is tasked by EO S-3-05 with outlining the effects of climate change on California and recommending an adaptation plan, as well as creating a strategy to meet the emission reduction targets.

Assembly Bill 32

Signed by the California Governor on September 27, 2006, AB 32 codifies a key requirement of EO S-3-05, specifically the requirement to reduce GHG emissions in California to 1990 levels by 2020. AB 32 tasks CARB with monitoring State sources of GHGs and designing emission reduction measures to comply with emission reduction requirements. However, AB 32 also continues the efforts of the CAT to meet the requirements of EO S-3-05 and states that the CAT should coordinate overall State climate policy.

To accelerate the implementation of emission reduction strategies, AB 32 requires that CARB identify a list of discrete early action measures that can be implemented relatively quickly. In October 2007, CARB published a list of early action measures that it estimated could be implemented and would serve to meet about 25 percent of the required 2020 emissions reductions (CARB, 2007). To assist CARB in identifying early action measures, the CAT published a report in April 2007 that updated their 2006 report and identified strategies for reducing GHG emissions (CAT, 2007). In its October 2007 report, CARB cited the CAT strategies and other existing strategies that can be utilized to achieve the remainder of the emissions reductions (CARB, 2007). AB 32 requires that CARB prepare a comprehensive “scoping plan” that identifies all strategies necessary to fully achieve the required 2020 emissions reductions. Consequently, in December 2008, CARB released its scoping plan to the public; the plan was approved by CARB on December 12, 2008. An update to the Climate Change Scoping Plan occurred on May 22,

2014, which included new strategies and recommendations to ensure reduction goals of near-term 2020 are met with consideration of current climate science.

A second update to the Climate Change Scoping Plan was adopted on December 14, 2017. The 2017 Scoping Plan Update addresses the 2030 target established by Senate Bill (SB) 32, as discussed below, and establishes a proposed framework of action for California to meet a 40 percent reduction in GHG by 2030 compared to 1990 levels. The key programs that the 2017 Scoping Plan Update builds on include the Cap-and-Trade Regulation, the Low Carbon Fuel Standard, increasing the use of renewable energy in the State, and reduction of methane emissions from agricultural and other wastes (CARB, 2017).

Senate Bill 1368.

SB 1368 (2006) requires the California Energy Commission (CEC) to develop and adopt regulations for GHG emissions performance standards for the long-term procurement of electricity by local publicly owned utilities. These standards must be consistent with the standards adopted by the California Public Utilities Commission. This effort will help protect energy customers from financial risks associated with investments in carbon-intensive generation by allowing new capital investments in power plants that have GHG emissions as low as or lower than new combined-cycle natural gas plants by requiring imported electricity to meet GHG performance standards in California and by requiring that the standards be developed and adopted in a public process.

Executive Order S-01-07

EO S-01-07 was signed by the California Governor on January 18, 2007. It mandates a state-wide goal to reduce the carbon intensity of transportation fuels by at least 10 percent by 2020. This target reduction was identified by CARB as one of the AB 32 early action measures in the October 2007 report (CARB, 2007a).

Senate Bill 375

SB 375 was approved by the California Governor on September 30, 2008. SB 375 provides for the creation of a new regional planning document called a Sustainable Communities Strategy (SCS). An SCS is a blueprint for regional transportation infrastructure and development that is designed to reduce GHG emissions from cars and light trucks to target levels set by CARB for 18 regions throughout California. Each of the various metropolitan planning organizations must prepare an SCS that is included in their respective regional transportation plan (RTP). An SCS informs the metropolitan planning organizations' transportation funding decisions by ensuring that they consider the growth anticipated by the general plans of the local governments within their jurisdiction. CARB determines whether the SCS would achieve the applicable regional GHG emissions reduction goals. As SCS is updated every four years, consistent with the RTP four-year cycle.

Assembly Bill 1493

In response to the transportation sector accounting for more than half of California's CO₂ emissions, AB 1493 (2002) required CARB to set GHG emission standards for passenger vehicles, light-duty trucks, and other vehicles primarily used for non-commercial personal transportation. The bill specifically required that CARB set GHG emission standards for motor vehicles manufactured in 2009 and all subsequent

model years. CARB adopted the standards in September 2004. The near-term (2009–2012) standards were estimated to result in a reduction of approximately 22 percent in GHG emissions compared to the emissions from the 2002 fleet, and the mid-term (2013–2016) standards were estimated to result in a reduction of approximately 30 percent. On July 8, 2009, USEPA granted California a waiver for the AB 1493 regulations. After adopting these initial greenhouse gas standards for passenger vehicles, CARB adopted continuing standards for future model years (CARB, 2019b).

Executive Order S-1-07

Issued on January 18, 2007, EO S-1-07 sets a declining low-carbon fuel standard for GHG emissions measured in CO₂e grams per unit of fuel energy sold in California. The target of the low-carbon fuel standard is to reduce the carbon intensity of California passenger vehicle fuels by at least 10 percent by 2020. The carbon intensity measures the amount of GHG emissions in the lifecycle of a fuel, including extraction/feedstock production, processing, transportation, and final consumption, per unit of energy delivered. CARB adopted the implementing regulation in April 2009. The regulation is expected to increase the production of biofuels, including those from alternative sources, such as algae, wood, and agricultural waste. CARB re-adopted the LCFS regulation in September 2015, and the changes went into effect on January 1, 2016. The program establishes a strong framework to promote the low carbon fuel adoption necessary to achieve the Governor's 2030 and 2050 greenhouse gas goals (CARB, 2016b).

Executive Order B-16-12

EO B-16-12 (2012) directs state entities under the Governor's direction and control to support and facilitate development and distribution of zero emissions vehicles (ZEV). This EO also sets a long-term target of reaching 1.5 million ZEVs on California's roadways by 2025. On a State-wide basis, EO B-16-12 also establishes a GHG emissions reduction target from the transportation sector equaling 80 percent less emissions than 1990 levels by 2050. In furtherance of this EO, the Governor convened an Interagency Working Group on ZEVs that has published multiple reports regarding the progress made on the penetration of ZEVs in the state-wide vehicle fleet.

Assembly Bill 1236

AB 1236 (2015) as enacted in California's Planning and Zoning Law requires local land use jurisdictions to approve applications for the installation of electric vehicles (EV) charging stations, as defined, through the issuance of specified permits unless there is substantial evidence in the record that the proposed installation would have a specific, adverse impact on public health or safety, and there is no feasible method to satisfactorily mitigate or avoid the specific, adverse impact.

Executive Order B-48-18

EO B-48-18 (2018) launches an 8-year initiative to accelerate the sale of EVs through a mix of rebate programs and infrastructure improvements. This EO also sets a new EV target of 5 million EVs in California by 2030. EO B-48-18 includes funding for multiple State agencies, including the CEC to increase EV charging infrastructure, and CARB to provide rebates for the purchase of new EVs and purchase incentives for low-income customers.

Senate Bill 605

On September 21, 2014, Governor Jerry Brown signed SB 605 which requires CARB to complete a comprehensive strategy to reduce emissions of short-lived climate pollutants in the state no later than January 1, 2016. As defined in the statute, short-lived climate pollutant means "an agent that has a relatively short lifetime in the atmosphere, from a few days to a few decades, and a warming influence on the climate that is more potent than that of carbon dioxide [CO₂]." SB 605, however, does not prescribe specific compounds as short-lived climate pollutants or add to the list of GHGs regulated under AB 32. In developing the strategy, CARB completed an inventory of sources and emissions of short-lived climate pollutants in the state based on available data, identified research needs to address any data gaps, identified existing and potential new control measures to reduce emissions, and prioritized the development of new measures for short-lived climate pollutants that offer co-benefits by improving water quality or reducing other air pollutants that impact community health and benefit disadvantaged communities.

The final strategy released by CARB in March 2017 focuses on methane, black carbon, and fluorinated gases, particularly hydrofluorocarbons, as important short-lived climate pollutants. The final strategy recognizes emission reduction efforts implemented under AB 32 (e.g., refrigerant management programs) and other regulatory programs (e.g., in-use diesel engines, solid waste diversion). The measures identified in the final strategy and their expected emission reductions will feed into the update to the CARB Scoping Plan.

Executive Order B-30-15

EO B-30-15 was signed by the Governor on April 29, 2015. It sets interim GHG targets of 40 percent below 1990 levels by 2030, to ensure California will meet its 2050 targets set by EO S-3-05. It also directs CARB to update the Climate Change Scoping Plan. The 2030 Target Scoping Plan Concept Paper was released on June 17, 2016.

Senate Bill 350

SB 350 codifies the GHG targets for 2030 set by EO B-30-15. To meet these goals, SB 350 also raises the Renewables Portfolio Standards from 33 percent renewable generation by 2020 to 50 percent renewable generation by December 31, 2030.

Senate Bill 32

Additionally, SB 32, signed in 2016, further strengthens AB 32 with goals of reducing GHG emissions to 40 percent below 1990 levels by 2030. Based on GHG emissions inventory data compiled by CARB through 2017 and the emission limit of 431 million metric tons (MMT) of CO₂e established in the Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report, California emission reduction goals for near-term 2020 will be met.

SB 100

SB 100 (2018) increased the standards set forth in SB 350 establishing that 44 percent of the total electricity sold to retail customers in California per year by December 31, 2024, 52 percent by December 31, 2027, and 60 percent by December 31, 2030, be secured from qualifying renewable energy sources.

SB 100 states that it is the policy of the State that eligible renewable energy resources and zero-carbon resources supply 100 percent of the retail sales of electricity to California. SB 100 requires that the achievement of 100 percent zero-carbon electricity resources do not increase the carbon emissions elsewhere in the western grid, and that the achievement not be achieved through resource shuffling.

Title 24, Parts 6

Title 24 of the California Code of Regulations (CCR) was established in 1978 and serves to enhance and regulate California's building standards. Although not initially promulgated to reduce GHG emissions, Part 6 of Title 24 specifically establishes Building Energy Efficiency Standards that are designed to ensure new and existing buildings in California achieve energy efficiency and preserve outdoor and indoor environmental quality. The CEC is required by law to adopt standards every 3 years that are cost effective for homeowners over the 30-year lifespan of a building. These standards are updated to consider and incorporate new energy-efficient technologies and construction methods. As a result, these standards save energy, increase electricity supply reliability, increase indoor comfort, avoid the need to construct new power plants, and help preserve the environment.

The 2019 Title 24 standards become effective on January 1, 2020. In general, single-family homes built with the 2019 standards are anticipated to use about 7 percent less energy due to energy efficiency measures than those built to the 2016 standards. Those built with rooftop solar electricity generation under the 2019 standards are anticipated to use about 53 percent less energy than those built to the 2016 standards. Non-residential buildings are anticipated to use about 30 percent less energy than those built to the 2016 standards, due mainly to lighting upgrades. Title 24 is updated every three years, and typically requires greater energy efficiency with each code update. Local building permit process verifies and enforces compliance to Title 24 standards. Refer to **Section 4.5** for additional information on Title 24 requirements.

Title 24, Part 11

Title 24, Part 11, was enacted to establish energy standards for new and renovated residential and commercial buildings built in California. In addition to the CEC's efforts, in 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11 of Title 24) is commonly referred to as CALGreen and establishes minimum mandatory standards and voluntary standards pertaining to the planning and design of sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and interior air quality. The CALGreen standards took effect in January 2011 and instituted mandatory minimum environmental performance standards for all ground-up, new construction of commercial; low-rise residential; and State-owned buildings, schools, and hospitals. The 2019 Standards improve upon the 2016 Standards for new construction of, and additions and alterations to, residential and non-residential buildings. The 2019 Standards went into effect on January 1, 2020. Local building permit process verifies and enforces compliance to Title 24 standards. Refer to **Section 4.5** for additional information on Title 24 requirements.

Assembly Bill 939 and Assembly Bill 341

In 1989, AB 939, known as the Integrated Waste Management Act (Public Resources Code § 40000 et seq.), was passed because of the increase in waste stream and the decrease in landfill capacity. The

statute established the California Integrated Waste Management Board, which oversees a disposal reporting system. AB 939 mandated a reduction of waste being disposed where jurisdictions were required to meet diversion goals of all solid waste through source reduction, recycling, and composting activities of 25 percent by 1995 and 50 percent by 2000.

AB 341 (2011) amended the California Integrated Waste Management Act of 1989 to include a provision declaring that it is the policy goal of the State that not less than 75 percent of solid waste generated be source-reduced, recycled, or composted by 2020, and annually thereafter. In addition, AB 341 required the California Department of Resources Recycling and Recovery (CalRecycle) to develop strategies to achieve the State's policy goal. CalRecycle has conducted multiple workshops and published documents that identify priority strategies that CalRecycle believes would assist the State in reaching the 75 percent goal by 2020.

Executive Order B-29-15

In response to the ongoing drought in California, EO B-29-15 (April 2015) set a goal of achieving a State-wide reduction in potable urban water usage of 25 percent relative to water use in 2013. The term of the EO extended through February 28, 2016, although many of the directives have since become permanent water-efficiency standards and requirements. The EO includes specific directives that set strict limits on water usage in the State. In response to EO B-29-15, the California Department of Water Resources modified and adopted a revised version of the Model Water Efficient Landscape Ordinance that, among other changes, significantly increased the requirements for landscape water use efficiency and broadened its applicability to include new development projects with smaller landscape areas.

Executive Order S-13-08

EO S-13-08 (November 2008) is intended to hasten California's response to the impacts of global climate change, particularly sea level rise. Therefore, the EO directs State agencies to take specified actions to assess and plan for such impacts. The final 2009 California Climate Adaptation Strategy Report was issued in December 2009, and an update, *Safeguarding California: Reducing Climate Risk*, followed in July 2014. To assess the State's vulnerability, the report summarizes key climate change impacts to the State for the following areas: agriculture, biodiversity and habitat, emergency management, energy, forestry, ocean and coastal ecosystems and resources, public health, transportation, and water. Issuance of the *Safeguarding California: Implementation Action Plans* followed in March 2016. In January 2018, the California Natural Resources Agency released the *Safeguarding California Plan: 2018 Update*, which communicates current and needed actions that state government should take to build climate change resiliency.

Regional

Plan Bay Area 2040

The ABAG and the MTC are jointly responsible for regional planning for the nine county, 101 city, Bay Area. ABAG/MTC jointly adopted a second RTP/SCS in 2017 known as Plan Bay Area 2040, which serves as a limited and focused update to the previous SCS issued by ABAG/MTC and maintains a similar set of land use and transportation strategies. The regional GHG reduction targets for the ABAG/MTC region beginning on October 1, 2018, are 10 percent per capita passenger vehicle GHG

emission reductions by 2020 and 19 percent per capita passenger vehicle GHG emission reductions by 2035 from 2005 levels.

San Francisco Bay Plan

The San Francisco Bay Plan (Bay Plan) was adopted by the Bay Conservation and Development Commission (BCDC) in 1968 and contains information that describes the values associated with the San Francisco Bay (Bay), policies regarding future uses of the Bay and shoreline (the first 100 feet inland from the shoreline), and maps that direct the protection and development of the Bay and its tributary waterways, marshes, managed wetlands, salt ponds, and shoreline in accordance with these policies. Since the publication of the Notice of Preparation (NOP), some Bay Plan policy amendments have been approved.

On October 3, 2019, the BCDC approved the Fill for Habitat Bay Plan Amendment (BPA; BPA 1-17). This amendment considers climate change and its effect on rising sea levels. As a result of rising sea levels, habitats will experience more frequent flooding and over time that could threaten their survival. The Fill for Habitat BPA includes several actions, such as placing more sediment in restoration sites, building higher elevation habitats, and providing hard surfaces in areas needed by Bay species (BCDC, 2015a).

On October 17, 2019, the BCDC approved the Environmental Justice and Social Equity BPA (BPA 2-17). This BPA takes into consideration climate change and its effect on rising sea levels. As a result of rising sea levels, low-income communities and those underrepresented or marginalized may have more difficulty preparing for, responding to, or recovering from a flood. Many of these communities are disproportionately exposed to hazardous or toxic substances, which may be exacerbated if contaminants are mobilized by flood waters. As a result of the Environmental Justice and Social Equity BPA, new policies will include further foresight and inclusiveness when it comes to at risk communities. The BCDC will evaluate proposed projects differently as a result of the new policy change, including but not limited to, requiring meaningful community involvement for certain projects, requiring that disproportionate impacts are identified and addressed, and using inclusive design principles in the evaluation of public access projects (BCDC, 2015b).

Below are policies in the Bay Plan that are applicable to the development of the Point Molate Site (Project Site).

3. To protect public safety and ecosystem services, within areas that a risk assessment determines are vulnerable to future shoreline flooding that threatens public safety, all projects—other than repairs of existing facilities, small projects that do not increase risks to public safety, interim projects, and infill projects within existing urbanized areas—should be designed to be resilient to a mid-century sea level rise projection. If it is likely the project will remain in place longer than mid-century, an adaptive management plan should be developed to address the long-term impacts that will arise based on a risk assessment using the best available science-based projection for sea level rise at the end of the century
4. To address the regional adverse impacts of climate change, undeveloped areas that are both vulnerable to future flooding and currently sustain significant habitats or species, or possess conditions that make the areas especially suitable for ecosystem enhancement, should be given

special consideration for preservation and habitat enhancement and should be encouraged to be used for those purposes.

5. Wherever feasible and appropriate, effective, innovative sea level rise adaptation approaches should be encouraged.

Local

City of Richmond General Plan

The General Plan contains an Energy and Climate Change Element that outlines goals and policies to reduce GHG emissions within City limits. The GHG reduction goals and policies are aimed at promoting clean and efficient transportation, sustainable and efficient energy uses, and sustainable development. Applicable goals and policies are as follows.

GOAL EC-4 Sustainable Development. Reduce energy consumption by promoting sustainable land uses and development patterns. Pursue infill development opportunities and encourage the construction of higher-density, mixed-use projects around existing public transit infrastructure, schools, parks, neighborhood-serving retail, and other critical services. Incorporate ecologically sustainable practices and materials into new development, building retrofits, and streetscape improvements.

Policy EC-2.4 Safe and Convenient Walking and Bicycling. Promote walking and bicycling as a safe and convenient mode of transportation. Improve pedestrian and bicycle amenities to serve the recreation and travel needs of residents and visitors in all parts of Richmond [the City]. Where feasible, the City will: connect major destinations such as parks, open spaces, civic facilities, employment centers, retail and recreation areas with pedestrian and bicycle infrastructure; promote shared roadways in residential streets; require new development and redevelopment projects to provide pedestrian and bicycle amenities, streetscape improvements and linkages to planned and completed City and regional multi-use trails; and develop safe routes to schools and out-of-school programs that allow access by bicycle and pedestrian paths or reliable and safe transit.

Explore innovative solutions such as bicycle-sharing programs and encourage businesses, schools, and residential developments to provide secure bicycle parking to ensure that these ecologically-friendly, low-impact transportation modes are available to all community members, thereby reducing emissions from vehicles within the City, improving environmental quality, and enhancing mobility and connectivity.

Policy EC-2.6 Private Automobile Use. Work toward creation of an urban landscape that will reduce reliance on private automobiles through land use planning and by providing amenities and infrastructure that encourage safe and convenient use of public transit, walking, and bicycling.

Policy EC-3.1 Renewable Energy. Promote the generation, transmission, and use of a range of renewable energy sources such as solar, wind power, and waste energy to meet current

and future demand and encourage new development and redevelopment projects to generate a portion of their energy needs through renewable sources.

Policy EC-3.2 *Energy Efficiency and Conservation.* Promote efficient use of energy and conservation of available resources in the design, construction, maintenance, and operation of public and private facilities, infrastructure, and equipment. Collaborate with partner agencies, utilities, and businesses to support a range of energy efficiency, conservation, and waste reduction measures including: development and retrofitting of green buildings and infrastructure; installation of energy-efficient appliances and equipment in homes and offices; and heightened awareness of energy and conservation issues. Collaborate with local workforce development programs to train and employ Richmond [City] residents in these other green jobs sectors.

Policy EC-4.1 *Mixed Use and Infill Development.* Promote mixed-use infill development on vacant and underutilized parcels along commercial corridors, in the Downtown area, at the planned ferry terminal, and in the Hilltop area. Support local-serving mixed-use in residential areas to provide needed services and amenities close to where people live and work. Protect existing affordable housing and develop strategies to prevent the displacement of renters and low-income residents. Require property owners to comply with and pay for State and federal requirements for site remediation as a condition for approving development on contaminated sites.

Policy EC-4.2 *Compact Walkable Neighborhoods and Livable Streets.* Promote safe and walkable neighborhoods and inter-connected streets through the design of streetscapes, public gathering places, and all types of physical development. Provide pedestrian amenities such as sidewalks and street trees, transit and bike improvements, lighting, and landscaping and appropriate traffic calming measures to ensure a safe pedestrian environment.

Support uses and public space improvements that generate street-level activity, create eyes-on-the-street, provide opportunities for community interaction, and encourage a sense of collective ownership of common areas. Encourage mixed-use development that attracts people and facilitates activity throughout the day. Prohibit isolated or gated communities in order to improve physical connectivity throughout the City, and create incentives to remove barriers in existing gated areas. Maintain streets to ensure that neighborhoods and streets are safe and well used.

Policy EC-4.3 *Green Buildings and Landscaping.* Require energy and resource efficient buildings and landscaping in all public and private development projects. Encourage the use of green and sustainable development standards and practices in planning, design, construction, and renovation of facilities; promote the use of green streets that incorporate extensive landscaping, pervious surfaces, and native planting; encourage new development and redevelopment projects to be LEED-certified green buildings; and promote ecologically-sensitive approaches to landscaping. Adopting green standards and

practices will improve the quality of the built environment, reduce environmental impacts, and support economic development goals for creating a green economy.

Policy EC-6.2 *Low-Lying Areas in Richmond.* Protect and manage low-lying areas that are likely to be affected by sea level rise and storm surges. Encourage development patterns, infrastructure, and flood management practices that can adapt to potential climate change impacts in these low-lying areas.

Policy EC-6.3 *Adapting to Climate Change.* Prepare for and adapt to future impacts of changing weather patterns and sea level fluctuations. Protect neighborhoods, infrastructure and facilities, the shoreline, and natural resources from the impacts of climate change. Require new developments to include an evaluation of climate change impacts in the project review process. Shoreline and public access improvements shall be designed to allow future increases in elevation along the shoreline edge to keep up with higher sea level values, when they occur. Design elements shall include providing adequate setbacks to allow for future elevation increases of at least 3 ft. from the existing elevation along the shoreline.

City of Richmond Climate Action Plan

In October 2016, the City adopted a Climate Action Plan to address environmental, social, and economic issues related to climate change. Consistent with AB 32 and EO S-3-05, the City has established a 2020 GHG reduction target of 15 percent below 2005 levels by 2020. Applicable goals and objectives from the Climate Action Plan are as follows.

- GOAL 1: GHG Emissions Reduction.** The City is committed to substantially reducing GHG emissions originating from the community and from government operations. The City will contribute to emissions reductions needed to achieve State-wide targets and reduce the societal and environmental risks associated with climate change.
- GOAL 2: Healthy and Resilient Community.** Richmond is committed to sustainable growth that provides a healthy, resilient, and equitable environment for all. Richmond [the City] will continue to invest resources in residences, businesses, infrastructure, and public spaces to better prepare for the impacts of climate change. Every resident should have access to walkable neighborhoods and good jobs. Homes should be safe, affordable, and efficient. Urban forestry and green space should be integrated throughout the City's neighborhoods.
- GOAL 3: Prosperous Local Economy.** The City will work with the local business community to capitalize on emerging clean technology economic opportunities in energy, transportation, land use, and general consumption. Local jobs creation will create more employment options and reduce the need for City residents to commute to distant employment centers.

- GOAL 4:** **Engaged Community and Educated Youth.** The City is committed to utilizing culturally and linguistically responsive outreach to engage the community and maximize community participation and benefits. Students, residents, and businesses are essential partners in confronting the climate change challenge. An engaged community is more cohesive and capable of achieving City climate program goals in energy efficiency, waste reduction, water conservation, sustainable transportation, and sustainable resources such as community gardens and healthy food. In Richmond's youth lies its foundation for a sustainable and resilient future. Young people empathize and embrace climate-smart behaviors, and are empowered to take ownership of Richmond's future as active citizens within the local climate change policy decision-making processes.
- Objective 1:** **Energy Efficient Buildings and Facilities.** Support energy conservation by businesses, residents, City government, and schools. Promote efficient use of energy in the design, construction, and operation of public and private facilities, infrastructure, and equipment.
- Objective 2:** **Increase Use and Generation of Renewable Energy.** Promote the generation, transmission, and use of a range of renewable energy sources, such as solar, wind power, and waste energy to meet current and future demand. Encourage new development and redevelopment projects to generate a portion of their energy needs through renewable sources.
- Objective 3:** **Sustainable Transportation and Land Use.** Encourage the use of low-emission and renewable fuel vehicles by residents and businesses, schools, public agencies, and City government. Support and promote enhanced and expanded public transit; walkability and bicycling; mixed-use urban streets; and creation of an urban landscape that reduces reliance on private automobiles. Promote the safe and efficient movement of goods by truck, rail, and ship to support port operations and industrial uses.
- Objective 4:** **Zero Waste.** Reduce the City's overall waste stream by reducing the City's consumption of goods and materials, and by adopting a zero waste philosophy. Promote waste reduction and recycling to minimize materials that are processed in landfills.
- Objective 5:** **Water Conservation.** Promote the use of existing incentives and develop new incentives to encourage schools, government facilities, residences, commercial businesses, and industrial users to reduce water consumption and increase the use of graywater and recycled water. Promote water efficient features and landscaping in all new development.
- Objective 6:** **Green Infrastructure, Urban Forestry, and Agriculture.** Restore and protect the natural environment to sequester GHG emissions and mitigate impacts of climate change, while updating Richmond's built environment to allow the City to adapt to potential climate change impacts such as sea-level rise and flooding. Promote development standards and land use patterns that encourage long-term sustainability, such as supporting the restoration of natural features and ecological systems to support the natural functions of soil, water, tree canopies, creeks, open space, and other natural resources. Protect neighborhoods, infrastructure, buildings, and other facilities from the

impacts of climate change such as sea level rise and flooding. Collaborate with local urban agriculture and tree planting organizations to identify sites with urban forestry and/or agriculture potential.

Objective 7: Green Business and Industry. Reduce and mitigate CO₂ and other GHG emissions from large commercial and industrial sources. Promote “green” industries while providing jobs and training to Richmond [City] residents. Encourage existing businesses and industries to become environmentally advanced and continue making positive contributions to the community. Work with businesses and industry, residents, and regulatory agencies to reduce the impact of direct, indirect, and cumulative impacts of pollution from industry, the Port, railroads, diesel trucks, and busy roadways.

Objective 8: Resiliency to Climate Change. Prepare Richmond [City] residents, workers, and businesses for future impacts of climate change, including changing weather patterns, sea level rise, prolonged periods of heat exposure, poor air quality, and associated health impacts. Ensure that community members have access to resources and programs that protect public health. Ensure affordable, safe, and climate resilient housing, and access to local food and agriculture.

4.2.3 ENVIRONMENTAL SETTING

Information provided in this section is derived from a number of sources including the Western Regional Climate Center, the USEPA, the BAAQMD, and the IPCC. This summary describes the Project Site’s baseline conditions, which are defined for the purposes of the analysis in this chapter as physical conditions in the vicinity of the study area on or around the publication of the NOP in July 2019.

4.2.3.1 Regional Meteorology

The Project Site is subject to a coastal climate regime. Summer months are often characterized by the presence of a semi-permanent high-pressure cell centered over the California coast. This high cell sits off the California coast and is the main influence on air quality in the SFBAAB. The SFBAAB is rarely influenced by cold air masses moving south from Canada and Alaska, as these frontal systems are generally weak and diffuse by the time they reach the Bay Area.

The average annual rainfall at the Project Site is 23.14 inches, with 83 percent of the precipitation occurring from November through March. Summer maximum temperatures average 70.4 degrees Fahrenheit (°F) in July and winter minimum temperatures average 42.6°F in January (Western Regional Climate Center, 2019).

The Project Site is bordered by the Bay on the west, and San Pablo Bay lies beyond to the north. Land rises from the Bay to the San Pablo Ridge that runs the length of the peninsula from the City to the end of the peninsula. Elevation on the Project Site ranges from 380 ft. above mean sea level to sea level at the edge of the Bay. Winds originating from the open ocean find their way into the Bay and are swept eastward through the Carquinez Straits to the Sacramento and San Joaquin valleys. Both easterly and southern winds originating in the Bay Area transport pollutants into the Central Valley of California.

4.2.3.2 Regional Air Quality

The Project Site is located in the SFBAAB, with BAAQMD holding jurisdiction over air quality under the delegation and oversight of CARB and the USEPA. BAAQMD has jurisdiction over Marin, Napa, southern Sonoma, San Francisco, San Mateo, Santa Clara, Alameda, Contra Costa, and western Solano counties in accordance with the CCAA. BAAQMD regulates air quality through its permit authority over most types of stationary emission sources and through its planning and review activities.

4.2.3.3 NAAQS and CAAQS Designations

As shown in **Table 4.2-3**, the SFBAAB has been designated “marginal” nonattainment under the federal 8-hour O₃ standard. The SFBAAB has also been designated nonattainment for eight- and one-hour O₃, PM₁₀, and PM_{2.5} under the CAAQS. A description of O₃, particulate matter, and DPM is provided below. The SFBAAB either meets the federal and California standards or is unclassifiable for all other CAPs.

TABLE 4.2-3
BAY AREA AIR QUALITY MANAGEMENT DISTRICT ATTAINMENT STATUS

Pollutant	Averaging Time	CAAQS	NAAQS
Ozone (O ₃)	8 hour	Nonattainment	Nonattainment (marginal)
	1 hour	Nonattainment	Not Applicable
Carbon Monoxide (CO)	8 hour	Attainment	Attainment
	1 hour	Attainment	Attainment
Respirable Particulate Matter (PM ₁₀)	Annual Arithmetic Mean	Nonattainment	Unclassifiable/Attainment
	24 Hour		
Fine Particulate Matter (PM _{2.5})	Annual Arithmetic Mean	Nonattainment	Nonattainment
	24 Hour		
Nitrogen Dioxide (NO ₂)	1 hour	Attainment	Unclassifiable/Attainment
	Annual Arithmetic Mean	Not Applicable	Attainment
Sulfur Dioxide (SO ₂)	24 Hour	Attainment	Unclassifiable/Attainment
	1 Hour	Attainment	Unclassifiable/Attainment
Lead (Pb)	30 Day Average	Not Applicable	Attainment
	Calendar Quarter	Not Applicable	Attainment
Source: BAAQMD 2017c.			

Ozone

Ozone is created in the presence of sunlight through a photochemical reaction involving ROG and NO_x. ROG and NO_x are a result of incomplete combustion of fossil fuels, which is the largest source of ground-level O₃. Because photochemical reaction rates depend on the intensity of ultraviolet light and air temperature, O₃ is primarily a summer air pollutant. As a photochemical pollutant, O₃ is formed only

during daylight hours under appropriate conditions, but is destroyed throughout the day and night. O₃ is considered a regional pollutant, as the reactions forming it take place over time and are often most noticeable downwind from the sources of the emissions.

Particulate Matter (PM₁₀ and PM_{2.5})

Particle pollution is a mixture of microscopic solids and liquid droplets suspended in air. This pollution, also known as particulate matter, is made up of a number of components including acids (e.g., nitrates and sulfates), organic chemicals, metals, soil or dust particles, and allergens (e.g., fragments of pollen or mold spores). The size of particles is directly linked to their potential for causing health problems. PM₁₀ and PM_{2.5} pose the greatest public health concerns, because they can traverse deep into the lungs (PM₁₀) and can be small enough to enter the bloodstream (PM_{2.5}).

Diesel Particulate Matter

DPM is defined as a TAC. TACs are substances with potential adverse health effects that are known or suspected to be emitted in California. According to CARB, the estimated health risk from TACs can be primarily attributed to relatively few compounds, such as DPM. DPM differs from many other TACs in that it is not a single substance, but rather a complex mixture of air pollutants composed of gaseous and solid materials. The visible emissions in diesel exhaust are known as particulate matter, including carbon particles or “soot.”

4.2.3.4 Sensitive Receptors

Some receptors are considered more sensitive than others to air pollutants. The reasons for greater than average sensitivity include pre-existing health problems, proximity to emissions source, or duration of exposure to air pollutants. Schools, hospitals, and convalescent homes are considered to be relatively sensitive to poor air quality because children, elderly people, and the infirmed are more susceptible to respiratory distress and other air quality-related health problems. Residential areas are considered sensitive to poor air quality, because people usually stay home for extended periods of time, with greater associated exposure to ambient air quality. Recreational uses are also considered sensitive due to a greater exposure to ambient air quality conditions because vigorous exercise associated with recreation places a high demand on the human respiratory system.

The land surrounding the Project Site is primarily industrial with some recreational applications. The nearest sensitive receptors to the Project Site are in a nearby residential neighborhood and on boat residences. The residential neighborhood is located approximately 1 mile to the southeast of the Project Site. The boat residences are located at Point San Pablo Yacht Harbor, approximately 0.50 miles to the north of the Project Site, on the backside of Potrero Ridge. The nearest school is Washington Elementary School located approximately 2 miles south of the Project Site.

4.2.3.5 Greenhouse Gas Emissions and Climate Change

The Greenhouse Effect and Climate Change

“Global warming” and “climate change” are common terms used to describe the increase in the average temperature of the earth’s near-surface air and oceans since the mid-20th century. Natural processes and

human actions have been identified as impacting climate. The IPCC has concluded that variations in natural phenomena such as solar radiation and volcanoes produced most of the warming from pre-industrial times to 1950 and had a small cooling effect afterward. Since the 19th century however, increasing GHG concentrations resulting from human activity such as fossil fuel combustion, deforestation, and other activities are believed to be a major factor in climate change. GHGs in the atmosphere naturally trap heat by impeding the exit of solar radiation that has hit the earth and is reflected back into space—a phenomenon sometimes referred to as the “greenhouse effect.” Some GHGs occur naturally and are necessary for keeping the earth’s surface inhabitable. However, increases in the concentrations of these gases in the atmosphere during the last 100 years have trapped solar radiation and decreased the amount that is reflected back into space, intensifying the natural greenhouse effect and resulting in the increase of global average temperature.

Carbon dioxide, methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFC), perfluorocarbons (PFC), and sulfur hexafluoride (SF₆) are the principal GHGs. When concentrations of these gases exceed historical concentrations in the atmosphere, the greenhouse effect is intensified. CO₂, CH₄, and N₂O occur naturally and are also generated through human activity. Emissions of CO₂ are largely by-products of fossil fuel combustion, whereas CH₄ results from off-gassing, natural gas leaks from pipelines, and industrial processes and incomplete combustion associated with agricultural practices, landfills, energy providers, and other industrial facilities. Other human-generated GHGs include fluorinated gases such as HFCs, PFCs, and SF₆, which have much higher heat-absorption potential than CO₂, and are byproducts of certain industrial processes.

CO₂ is the reference gas for climate change, as it is the GHG emitted in the highest volume. The effect that each of the GHGs have on global warming is the product of the mass of their emissions and their global warming potential (GWP). GWP indicates how much a gas is predicted to contribute to global warming relative to how much warming would be predicted to be caused by the same mass of CO₂. For example, CH₄ and N₂O are substantially more potent GHGs than CO₂, with GWPs of approximately 30 and approximately 275 times, respectively, that of CO₂, which has a GWP of 1.

In emissions inventories, GHG emissions are typically reported as metric tons of CO₂e. CO₂e is calculated as the product of the mass emitted of a given GHG and its specific GWP. While CH₄ and N₂O have much higher GWPs than CO₂, CO₂ is emitted in higher quantities and it accounts for the majority of GHG emissions in CO₂e, both from commercial developments and human activity in general.

Greenhouse Gas Emissions Estimates

Global Emissions

Worldwide emissions of GHGs in 2014 were 49 billion tons of CO₂e per year (CAIT, 2019). This figure includes ongoing emissions from industrial and agricultural sources, but excludes emissions from land use changes.

U.S. Emissions

In 2017, the United States emitted about 6.46 billion tons of CO₂e per year. Of the five major sectors nationwide—residential and commercial, industrial, agriculture, transportation, and electricity—

transportation accounts for the highest fraction of GHG emissions (approximately 29 percent), closely followed by electricity (approximately 28 percent); these emissions from energy are primarily generated from the combustion of fossil fuels (approximately 80 percent), and emissions from transportation are entirely generated from direct fossil fuel combustion (USEPA, 2019).

State of California Emissions

In 2019, CARB published its latest annual GHG emissions inventory in *California Greenhouse Gas Emissions for 2000 to 2017, Trends of Emissions and Other Indicators* (CARB, 2019a). In 2017, emissions from GHG emitting activities Statewide were 424 MMT of CO₂e, 5 MMT of CO₂e lower than 2016 levels, and 7 MMT of CO₂e below the 2020 GHG Limit of 431 MMT CO₂e. Per capita GHG emissions in California dropped from a 2001 peak of 14.1 MT per person to 10.7 MT per person in 2017, a 24 percent decrease. Overall trends in the inventory also demonstrate that the carbon intensity of California's economy (the amount of carbon pollution per million dollars of gross domestic product [GDP]) is declining. From 2000 to 2017, the carbon intensity of California's economy has decreased by 41 percent from 2001 peak emissions while simultaneously increasing GDP by 52 percent. In 2017, GDP grew 3.6 percent while the emissions per GDP declined by 4.5 percent compared to 2016.

The transportation sector remains the largest source of GHG emissions in the State. Direct emissions from vehicle tailpipe, off-road transportation mobile sources, intrastate aviation, rail, and watercraft account for 40 percent of Statewide emissions in 2017. The annual increase in transportation emissions in 2017 has slowed down slightly compared to the previous three years. Emissions from the electricity sector accounts for 15 percent of the inventory and shows another large drop in 2017 due to a large increase in renewable energy. For the first time since California started to track GHG emissions, California uses more electricity from zero-GHG sources (for the purpose of the GHG inventory, these include hydro, solar, wind, and nuclear energy) than from GHG-emitting sources for both in-state generation and total (in-state plus imports) generation in 2017. The industrial sector has seen a slight emissions decrease in the past few years, and remains at 21 percent of the inventory. Emissions from commercial, residential, and agriculture sectors have remained relatively constant in recent years.

Bay Area Emissions

In the Bay Area, the last inventory prepared by the BAAQMD (BAAQMD, 2015) indicates that the transportation sector and industrial/commercial sector represent the largest sources of GHG emissions, accounting for 39.7 percent and 35.7 percent, respectively, of the Bay Area's 86.6 million tons of CO₂e in 2011. Electricity/co-generation sources account for about 14 percent of the Bay Area's GHG emissions, followed by residential fuel usage at about 7.7 percent. Off-road equipment sources currently account for approximately 1.5 percent of total Bay Area GHG emissions (BAAQMD, 2015).

City of Richmond Emissions

The City's Climate Action Plan presents baseline GHG inventories and future year inventory projections. The City's baseline Community GHG Inventory for 2005 forms the basis for setting emissions reduction targets and measuring future progress. In developing the Climate Action Plan, the City revised its existing 2005 inventory with better transportation and solid waste data, and compiled a 2012 inventory update that allows the City to start assessing emissions trends over time.

In 2012, the City emitted approximately 4.9 MMT of CO₂e, of which almost 4.2 MMT of CO₂e (82 percent) is attributed to large industrial emissions regulated by AB 32. The 2012 inventory is similar to the 2005 inventory in terms of total emissions and relative contribution by sector. The vast majority of emissions were the result of large industrial sources that are regulated by AB 32, and when those sources are excluded, the biggest contributions are from On-Road Transportation (54 percent), followed by Commercial/Industrial/Municipal Energy Use (25 percent), and Residential Energy Use (13 percent).

The City's Climate Action Plan forecasts Business-As-Usual emissions for 2020, 2030, 2040, and 2050. The 2020 and 2030 forecasts were derived based on demographic growth projections from the General Plan for future population, jobs, and households. Emissions forecasts for 2040 and 2050 were derived by continuing the average annual growth rates from 2005 to 2030. Excluding sources regulated by AB 32, the City's community emissions are expected to increase approximately 11 percent between 2005 (the baseline year) and 2020, from 693,426 to 767,673 MT of CO₂e; by 2030 emissions would increase approximately 46 percent from baseline conditions to approximately 1,015,000 MT of CO₂e; by 2050 emissions would increase to nearly 1.3 million MT of CO₂e.

On September 6, 2008, the Richmond City Council passed Resolution No. 108-08 establishing a goal of achieving GHG reduction targets consistent with AB 32 and the EO S-3-05, which correspond to achieving 1990 emissions levels by 2020 and 80 percent below 1990 levels by 2050. Consistent with Resolution No. 108-08, the City has established a 2020 GHG reduction target for the CAP of 15 percent below 2005 levels by 2020. The City's 2020 GHG emissions target, equivalent to 15 percent below 2005 levels, is 589,412 MT of CO₂e.

In 2013 the City joined Marin Clean Energy (MCE) to increase renewable energy choices for local businesses and residents. A "Community Choice Aggregation" program, MCE procures electricity from renewable sources – solar, wind, bioenergy, geothermal, and small hydro – and then partners with Pacific Gas & Electric (PG&E) to deliver electricity to homes and businesses. As of 2015, over 80 percent of the City's electrical customers have enrolled in MCE; of these, 99 percent are enrolled in the Light Green Option that sources 56 percent of its energy supply from renewable energy sources, and less than 1 percent were enrolled in the Deep Green option, which provides a 100 percent renewable energy option (City of Richmond, 2016d).

Impacts from Climate Change

Ecosystem and Biodiversity Impacts

Climate change is affecting diverse types of ecosystems and the effects are anticipated to become more severe over time (USEPA, 2016b). As temperatures and precipitation change, seasonal shifts in vegetation will occur; this is affecting the distribution of associated flora and fauna species. As the range of species shifts, habitat fragmentation will occur, with impacts on the distribution of certain sensitive species. The IPCC states that "a large fraction of both terrestrial and freshwater species faces increased extinction risk under projected climate change during and beyond the 21st century, especially as climate change interacts with other stressors, such as habitat modifications, over exploitation, and invasive species" (IPCC, 2014). Shifts in existing biomes could make ecosystems vulnerable to encroachment by invasive species. Forest dieback poses risks for carbon sequestration and storage, biodiversity, wood production, water quality, and economic activity. Wildfires, which are an important control mechanism in

many ecosystems, have become more severe and more frequent, making it difficult for native plant species to repeatedly re-germinate. Continued emission of GHGs will cause further warming and long-lasting changes in all components of the climate system, increasing the likelihood of severe, pervasive, and irreversible impacts for people and ecosystems (IPCC, 2014).

Human Health Impacts

Climate change may increase the risk of vector-borne infectious diseases, particularly those found in tropical areas and spread by insects such as malaria, dengue fever, yellow fever, and encephalitis. Cholera, which is associated with algal blooms, could also increase. While these health effects would largely affect tropical areas in other parts of the world, effects are also impacting California and the Sacramento area. Warming of the atmosphere is expected to increase smog and particulate pollution, which could adversely affect individuals with heart and respiratory problems, such as asthma. Extreme heat events would also be expected to occur with more frequency and could adversely affect the elderly, children, and the homeless. Finally, the water supply impacts and seasonal temperature variations expected as a result of climate change could affect the viability of existing agricultural operations, making the food supply more vulnerable (USEPA, 2016c).

Sea Level Rise

San Francisco Bay, the largest estuary on the west coast of the North and South American continents, has witnessed a sea level rise of approximately 7.6 inches over the past 150 years, which is equivalent to approximately 0.05 inches per year (BCDC, 2019). As a result of increasing global temperatures, sea levels are expected to continue rising for the foreseeable future. Using the IPCC GHG emission scenarios, in 2010 the California CAT developed sea level rise projections (relative to sea level in 2000) for the State that range from 10 to 17 inches by 2050, 17 to 32 inches by 2070, and 31 to 69 inches at the end of the century (BCDC, 2019). Recently, the BCDC modeled the effects of sea level rise on the shoreline of the Bay. **Figure 4.2-1** depicts the inundation areas of the two scenarios modeled: a 12-inch and a 52-inch sea level rise. As the figure illustrates, the modeling indicates that Point Molate would be largely unaffected by a rise of 12 inches, and only a tiny portion of the Project Site, located near the southern boundary, would be affected by a 52-inch rise in sea level.

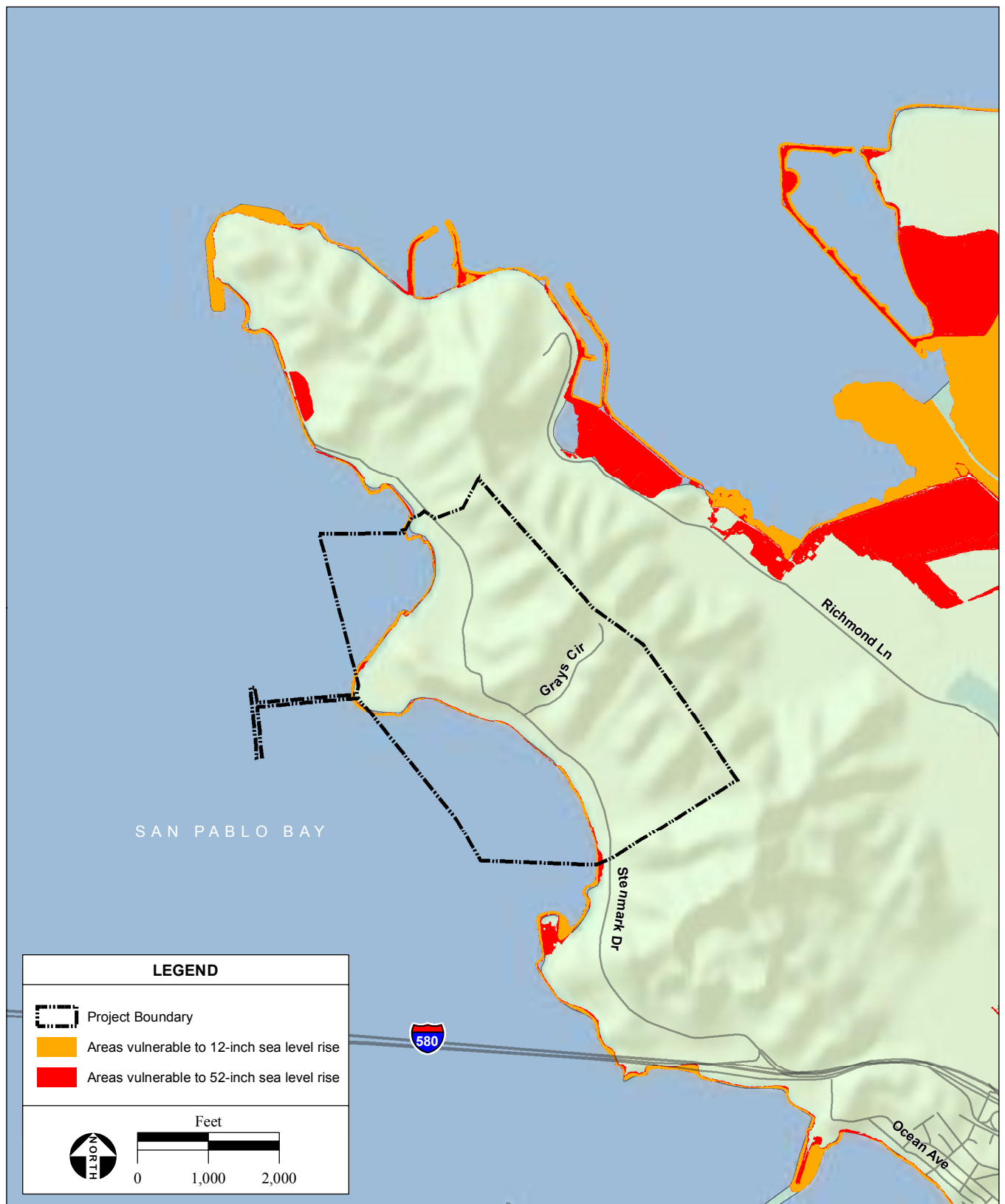
4.2.4 2011 FEIR ANALYSIS

This section provides a summary of the impacts to air quality and global climate change conditions analyzed for the Casino Project within the 2011 FEIR followed by a description of any changes that have occurred since the 2011 FEIR that have the potential to affect the impact analysis for the Modified Project.

4.2.4.1 2011 FEIR Summary of Impacts

Impacts

Construction of the Casino Project would have resulted in NO_x, PM₁₀, and PM_{2.5} emissions that would have exceeded the BAAQMD CEQA thresholds of significance, and demolition activities had the potential to release friable asbestos materials. Implementation of effective and comprehensive control measures for PM₁₀ and PM_{2.5} would have reduced emissions below the thresholds of significance. NO_x emissions



SOURCE: ART Bay Area Sea Level Rise and Shoreline Analysis, 2019;
DigitalGlobe aerial photograph, 8/31/2017; AES, 10/30/2019

Point Molate Mixed-Use Development SEIR / 216544 ■

Figure 4.2-1
Shoreline Areas Vulnerable to Sea Level Rise

during construction would have been reduced below the BAAQMD CEQA Guideline threshold by incorporating mitigation, resulting in a less-than-significant impact. Strict compliance with NESHAP and the Occupational Safety and Health Administration procedures would have resulted in less-than-significant impacts concerning friable asbestos materials, and therefore no mitigation was identified.

Operation of the Casino Project would have resulted in emissions of ROG, NO_x and PM₁₀ exceeding the BAAQMD CEQA guidelines, and had the potential to concentrate pollutants and create odors indoors. These were potentially significant impacts. Mitigation measures were provided which would have reduced operational emissions, reduced the concentration of indoor pollutants and odors, and provided employees and patrons with advanced notice so as to avoid exposure to environmental tobacco smoke. This would have reduced impacts to less-than-significant levels.

Cumulative Impacts

Operations of the proposed development under the Casino Project in the year 2025 would have resulted in ROG, NO_x, and PM₁₀ emissions above the BAAQMD CEQA thresholds. This would have been a potentially significant impact. Implementation of mitigation measures would have reduced ROG, NO_x, and PM₁₀ emissions in the cumulative year 2025 below the BAAQMD CEQA thresholds; therefore, cumulative air quality impacts would have been less than significant with mitigation.

Construction and operation of the proposed development under the Casino Project in the year 2025 would have resulted in CO and GHG emissions. CO would have been a less-than-significant cumulative impact while GHG would have been a potentially significant cumulative impact. CO emissions were determined to not require a Hot Spot Analysis because an acceptable Level of Service (LOS) was predicted for 2025. Therefore, this cumulative impact would have been less than significant. Implementation of GHG mitigation measures would have ensured consistency with all applicable GHG reduction strategies and reduced construction and operational GHG emissions below the BAAQMD thresholds. Therefore, the cumulative impact would have been less than significant.

4.2.4.2 Changes Since the 2011 FEIR

In addition to the changes to the project, there have been several regulatory changes that are accounted for in the analysis below of the Modified Project. Appendix G of the CEQA Guidelines significance thresholds for air quality have changed since 2011 and a new General Plan was adopted in 2012. Additionally, the City adopted a Climate Action Plan in October 2016, and the State adopted multiple bills and policies that will reduce GHG emissions. None of these changes constitute significant new information that would negatively alter a project's impact on the environment.

4.2.5 IMPACTS

4.2.5.1 Thresholds of Significance

Criteria for determining the significance of impacts to air quality and GHG emissions have been developed based on Appendix G of the CEQA Guidelines and relevant agency thresholds. Impacts associated with air quality would be considered significant if the Modified Project would:

- conflict with or obstruct implementation of the applicable air quality plan;
- result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or State ambient air quality standard;
- expose sensitive receptors to substantial pollutant concentrations; or
- result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Appendix G clarifies that the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the determinations of whether a project exceeds an air quality threshold. Accordingly, for the second threshold listed above, the project would result in a cumulatively considerable net increase of a CAP if it would exceed any of the following BAAQMD thresholds of significance.

- ROG: 54 pounds (lbs)/day
- NOx: 54 lbs/day
- PM₁₀ (exhaust): 82 lbs/day
- PM_{2.5} (exhaust): 54 lbs/day

For PM₁₀ and PM_{2.5} as part of fugitive dust generated during construction, the BAAQMD Guidelines specify compliance with Best Management Practices as the threshold.

Impacts associated with GHG emissions would be considered significant if the Modified Project would:

- generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or
- conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

4.2.5.2 Method of Analysis

Emissions resulting from the alternatives are analyzed in two distinct phases, construction and operation. Construction emissions are temporary in nature.

Construction and operation emissions were estimated for two development options: Option 1 (Residential-Heavy Option) and Option 2 (Commercial-Heavy Option). These project options are described in **Section 3.0**. In addition, construction and operational emissions were modeled with and without the wastewater treatment plant (WWTP).

The most recent version of the California Emissions Estimator Model, Version 16.3.2 (CalEEMod) air quality modeling program was used to estimate construction and operational emissions (**Appendix M**). CalEEMod is a California-specific computer model that estimates construction, area, mobile, and CO₂ emissions based on land uses. Both CARB and the USEPA have approved the CalEEMod air quality modeling program for use in CEQA environmental documents for air quality analyses.

Criteria Pollutant Emissions**Construction Assumptions**

During construction, PM₁₀ and PM_{2.5} are primarily produced during mass and fine grading activities. NO_x, ROG, PM₁₀, and PM_{2.5} are produced during the combustion of diesel and gasoline fuels by heavy-duty construction equipment and employee vehicles. Emissions were estimated assuming that construction would begin in February 2021 and continue until November 2028. Construction phase start dates were adjusted from CalEEMod defaults based on the schedule provided by Winehaven Legacy LLC (the Applicant).

Construction of the Modified Project is assumed to use all Tier 4 Final off-road equipment, except for paving equipment which are not widely available. Construction emissions conservatively assume implementation of Wastewater Treatment Variant B, which would require construction of an on-site WWTP, because that project variant would result in the highest overall air quality emissions. Construction emissions from WWTP installation were calculated given six days of site preparation, grading, and building construction, based on information provided by the Applicant. WWTP installation was assumed to require 50 haul truck trips. CalEEMod input tables and emissions results are summarized below and included in **Appendix M**. Additionally, construction emissions for Modified Project assumed implementation of the following BAAQMD recommended Best Management Practices for control of fugitive dust.

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
2. All haul trucks transporting soil, sand, or other loose material offsite shall be covered.
3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
4. All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.
5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, § 2485 of CCR). Clear signage shall be provided for construction workers at all access points.
7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
8. A publicly visible sign shall be posted with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The applicable air district's phone number shall also be visible to ensure compliance with applicable regulations.

Operational Assumptions

The Modified Project would generate operational emissions of CAPs, including ozone precursors (ROG and NO_x), CO, PM₁₀, PM_{2.5}, and sulfur oxides. CalEEMod was used to estimate area, energy, and mobile

emissions associated with operation of the Modified Project. Input values for the model included CalEEMod defaults and site-specific data. A detailed list of the assumptions used to estimate operational emissions is included in **Appendix M**. The operational emissions analysis for the Modified Project conservatively assumes an operational year of 2024 as the earliest year people could possibly occupy the Project Site, and a buildout year of 2028, when the Modified Project would be fully operational. Area, energy, and mobile emissions were modeled for the two development scenarios based on proposed land uses types and sizes as described in **Section 3.0**, and the trip generation data described in **Section 4.13**. The trip generation data includes data for internal trips and vehicle miles traveled. Based on the Applicant's project description, operational emissions from energy usage assumes that 25 percent or residential units would use all electric appliances and have no natural gas usage. Operational emissions results from CalEEMod are presented below, and CalEEMod input tables and output files are included within **Appendix M**.

Ferry emissions were estimated using USEPA Tier 2 emission factors. Refer to Table 1A of **Appendix M** for the calculation methodology for ferry emissions. Operational emissions for the WWTP were estimated using CalEEMod, in addition to outside data sources. Mobile emissions from brine trucks trips were estimated using Emission FACTors 2017 emission factors for Heavy-Heavy Duty Trucks, as shown in Table A2 of **Appendix M**. Volatile organic compound (VOC) emissions from the WWTP were estimated using the Mojave Desert Air Quality Management District's default emission factor¹ for activated sludge treatment systems, as shown in Table A3 of **Appendix M**.

Health Impacts

The health effects of the Modified Project's contribution to CAPs that are out of attainment were estimated using a photochemical grid model, Comprehensive Air Quality Model with extensions. This model can estimate the small increases in concentrations of O₃ and PM_{2.5} in the region as a result of the emissions of criteria and precursor pollutants from the Modified Project. Then Benefits Mapping and Analysis Program (BenMAP), a USEPA-authored program, was applied to estimate the resulting health effects from the small increases in concentration. Only the health effects of O₃ and PM_{2.5} are estimated, as those are the pollutants that the USEPA uses in BenMAP to estimate the health effects of emissions of NO_x, VOCs (also known as ROG_s), CO, SO₂, PM₁₀, and PM_{2.5}. O₃ and PM_{2.5} have the most critical health effects and are the primary pollutants for which the air basin is in nonattainment (i.e., where there is a significant cumulative impact to which the Modified Project could contribute).

USEPA's default health effect functions in BenMAP for PM use fine particulate (PM_{2.5}) as the causal PM agent, so the health effects of PM₁₀ are represented using PM_{2.5} as a surrogate. NO_x and VOCs are not CAPs but, in the presence of sunlight, form O₃, which is analysed, and contribute to the formation of secondary PM_{2.5}, which also is analysed. SO₂ and CO also are not accounted for individually, but are evaluated due to their contribution to the formation of secondary PM_{2.5} and O₃, both of which are analysed.

¹ The Mojave Desert Air Quality Management District (MDAQMD) emission factor was used because the emission factors presented by MDAQMD are for small WWTPs handling less than 10 million gallons per day. The BAAQMD permit handbook for VOC emissions only report emission factors for Publicly Owned Treatment Works (POTW) facilities. POTWs are larger facilities with higher flow characteristics and are not representative of the WWTP proposed for the Modified Project.

Carbon Monoxide Hot Spot Analysis Methodology

Implementation of the Modified Project would result in emissions of CO. Because CO disperses rapidly with increased distance from the source, emissions of CO are considered localized pollutants of concern rather than regional pollutants, and can be evaluated by Hot Spot Analysis. In accordance with 40 CFR 93.123, quantitative analysis is required if the following criteria are met.

- For projects in or affecting locations, areas, or categories of sites which are identified in the applicable implementation plan as sites of violation or possible violation
- For projects affecting intersections that are at LOS D, E, or F, or those that would change to LOS D, E, or F because of increased traffic volumes related to the project
- For any project affecting one or more of the top three intersections in the CO nonattainment or maintenance area with highest traffic volumes, as identified in the applicable implementation plan
- For any project affecting one or more of the top three intersections in the CO nonattainment or maintenance area with the worst LOS, as identified in the applicable implementation plan

The Modified Project is not in an area or category of site that has been identified as a site of violation or possible violation for CO nor is it located in a CO nonattainment or maintenance area. However, as shown in the Transportation Impact Analysis, provided as **Appendix D**, some intersections currently operating at LOS D, E, or F would be affected by Modified Project-related traffic and further analysis of the CO is required. The CO Protocol was used to screen the potential for impacts connected with CO Hot Spots. In 1997, the EPA approved the CO Protocol for use as an alternative hot spot analysis method in California. The CO Protocol is the standard method used for project-level CO analysis by Caltrans.

The CO Protocol outlines a screening process for determining which intersections could potentially have significant impacts. Projects that would lead to worsening the level of service (LOS) of a signalized intersection to E or F represent a potential for a CO violation and would require further analysis; projects that do not worsen signalized intersections to LOS E or F would require no more analysis. Projects that significantly increase the delay (delay of 10 seconds or more) at an intersection operating at LOS E or LOS F in the existing condition would represent a potential for a CO violation and would require further analysis.

The potential for CO hot-spots was further evaluated using a quantitative screening method recommended by BAAQMD, as described in **Impact 4.2.4**, below.

Health Impacts of CAP Emissions

Friant Ranch Evaluation

As discussed above, Comprehensive Air Quality Model with extensions, was applied to estimate the small increases in concentrations of ozone and PM_{2.5} in the region as a result of the emissions of criteria and precursor pollutants from the Modified Project. Then BenMAP was applied to estimate the resulting health effects from the small increases in concentration. As mentioned above, only the health effects of ozone and PM_{2.5} are estimated because they have the most critical health effects, and thus are the emissions evaluated to determine the Modified Project's health effects.

This analysis estimates the health effects of CAPs and their precursors, specifically those that are evaluated by the USEPA in rulemaking setting the national ambient air quality standards: NO_x, VOC [also known as ROG, which are virtually the same as VOC with some slight differences], CO, ozone, SO₂, and PM_{2.5}. USEPA's default health effect functions in BenMAP for PM use fine particulate (PM_{2.5}) as the causal PM agent, so the health effects of PM₁₀ are represented using PM_{2.5} as a surrogate. NO_x and VOCs are not criteria air pollutants but, in the presence of sunlight, they form ozone and contribute to the formation of secondary PM_{2.5} and thus are analysed here. As a conservative measure, SO₂ and CO are evaluated due to their small contribution to the formation of secondary PM_{2.5} and O₃. The health effects from O₃ and PM_{2.5} are examined for the Modified Project because the USEPA has determined that these CAPs would have the greatest effect on human health. The emissions of other CAPs, including VOC, NO_x, CO, and SO₂, are analysed in their contribution in the formation of O₃ and secondary PM_{2.5}.

Toxic Air Contaminants and Hazardous Air Pollutants

Construction

CARB and the USEPA have identified friable asbestos as TACs and HAPs. Friable asbestos exist when naturally occurring serpentine soil or rocks are disturbed during grading and site preparation activities. Asbestos TACs and HAPs have no quantifiable threshold; therefore, for this analysis, friable asbestos areas within the Project Site will be identified and mitigation measures that would reduce airborne asbestos are identified in **Section 4.7.5.4**.

CARB has identified DPM as a TAC. DPM is generated during construction by on- and off-road construction vehicles. DPM is also generated in substantial quantities by high-volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic. Health risks from TACs are a function of the concentration of emissions and the duration of exposure. The primary source of TACs during construction is DPM from construction equipment exhaust. The evaluation of TACs from construction is conducted quantitatively in a Health Risk Assessment (HRA).

Construction HRA

A construction HRA was prepared for the Modified Project by Ramboll US Corporation (Ramboll) (**Appendix M**). The HRA conservatively assumed the most intense development scenario of the Modified Project consisting of Option 1 with an on-site WWTP. Additionally, even though a separate project with independent utility, emissions from grading of the San Francisco Bay Trail (Bay Trail) were considered as part of the Modified Project's emissions. The construction HRA was based on construction emissions estimates from Option 1 as these emissions were greater than those produced from construction of Option 2. While total acreage is the same for both development options, construction emissions were greater under Option 1 due to default CalEEMod assumptions related to land use types, such as emission factors for architectural coatings. Prior to construction of the Modified Project, some existing structures on the Project Site would be demolished. The HRA was prepared in accordance with the current BAAQMD guidelines for evaluating health risk impacts. To be conservative, this analysis assumed that the Planning Areas would be constructed sequentially over a period from 2021-2028, with residents potentially moving in to each Planning Area as it is completed, thus being exposed to construction activity of the other Planning Areas. CEQA does not require analysis of a project's impacts on itself, but this Draft SEIR includes analysis of the potential impacts during construction of later phases on on-site sensitive

receptors who may reside in earlier-completed phases to more fully inform the decision makers and the public. The HRA also evaluated the potential impact from construction of the Modified Project on the nearest off-site sensitive receptors, which are residential areas. The location of sensitive receptors in the vicinity of the Modified Project is shown in Figure 1 of the Construction HRA in **Appendix M**.

Assumptions

The TAC emissions from construction of the Modified Project were used to estimate health risk on nearby sensitive populations. The primary TACs evaluated in the HRA were DPM and PM_{2.5}. DPM emissions were used to evaluate the cancer risk and non-cancer chronic hazard index (HI) from construction of the Modified Project. The HRA assumed that all on-site and local off-site sources of PM₁₀ exhaust emissions were DPM. This is a conservative assumption given that a fraction of PM₁₀ emissions are from non-diesel sources, such as gasoline-fueled passenger vehicles. All off-road construction equipment was assumed to be certified as Tier 4 Final, with the exception of paving equipment, which are not widely available. Exhaust PM_{2.5} emissions were used to evaluate the PM_{2.5} concentration due to construction of the Modified Project. PM_{2.5} emissions were conservatively assumed to be equal to PM₁₀ emissions.

Modeled Emissions Rates

Based on the construction schedule (provided in **Appendix M**), each parcel of the Modified Project may be completed and occupied in sequence, with residents being exposed to the remainder of construction of the other parcels. Residents of each parcel were evaluated separately to determine the maximum health impacts of construction, along with off-site residential receptors exposed to the entire construction period.

To be conservative and show the worst case potential impacts to off-site sensitive receptors, all construction activity related to demolition, parcel grading, and site preparation were modeled as if it occurred in Planning Area A (the parcel nearest to off-site sensitive receptors) even though the grading and site preparation would be spread over eight Planning Areas and demolition would mainly occur in Planning Areas F, G, and H. Building construction, paving, and architectural coating activity was divided among the eight Planning Areas based on the proposed program in each Planning Area. Planning Area phase allocations are presented in Table 4 of the Construction HRA in **Appendix M**. Monthly allocations of each construction phase are shown in the Gantt chart in Table 3 of the Construction HRA in **Appendix M**.

To determine impacts to off-site receptors from operations, all emissions from each building in the Modified Project were summed by year and modeled on an annual basis. For on-site receptors, separate emission rates were calculated to represent only the emissions that occur during the potential exposure period. For example, as shown in Table 5 of the Construction HRA in **Appendix M**, Planning Area A was assumed to be occupied by residents in October 2024. After this time, construction emissions will occur at Planning Areas B through H. For modeling purposes, only the emissions from the construction of Planning Areas B through H were annualized and included in the Planning Area A exposure calculations. This same approach applies for each combination of Source and Receptor, only annualizing emissions that occur during the exposure period. The exposure periods and emission by parcel are shown in the expanded Gantt chart in Table 5 of the Construction HRA in **Appendix M**. The annualized emission rates for each combination of source-receptor-year are presented in Table 6 of the Construction HRA in

Appendix M. The change in duration is addressed in the exposure parameter calculation, discussed below.

Air Dispersion Modeling

Construction-related risks from the Modified Project were analyzed by estimating ambient air concentrations of DPM and PM_{2.5}. AERMOD was used to estimate air concentrations of DPM and PM_{2.5}. AERMOD is a steady-state Gaussian plume model developed by the USEPA for regulatory applications. AERMOD requires emission source locations and release parameters, receptor locations, and processed meteorological data. The construction source parameters are shown in Table 7 of the Construction HRA in **Appendix M**.

The five most recent years (2013, 2014, 2015, 2017, and 2018) of complete meteorological data from nearby stations were processed with the USEPA meteorological data preprocessor, AERMET. Input data sources include surface data from the Chevron® Long Wharf meteorological observation station, upper air data from Oakland International Airport, and land cover data from the 1992 National Land Cover Data Set of the U.S. Geological Survey. A windrose of the five years of processed data is presented in Figure 2 of the Construction HRA in **Appendix M**.

Emissions were modeled assuming construction only occurs daily from 7 a.m. to 7 p.m. The AERMOD input files are provided electronically as Appendix C of the Construction HRA in **Appendix M**. The model sources setup is presented in Figure 3 of the Construction HRA in **Appendix M**, and the on-site and off-site residential receptors are shown in Figure 4 of the Construction HRA in **Appendix M**.

Exposure and Risk Calculations

This analysis followed the recommended methodology from the 2015 Office of Environmental Health Hazard Assessment (OEHHA) Hot Spots Guidance as adopted in the BAAQMD HRA Guidelines. Impacts due to construction emissions were conservatively evaluated using default exposure assumptions for a resident child from OEHHA. The resident child scenario assumes a much higher daily breathing rate and age-sensitivity factor than other sensitive receptor populations and therefore is the most conservative scenario to evaluate. The exposure parameters used to estimate excess lifetime cancer risks for a resident child are presented in Table 8 of the Construction HRA in **Appendix M**.

Cancer risk and chronic HI were calculated from ambient annual concentrations using intake factors, cancer potency factors, and chronic reference exposure levels calculated consistent with the 2015 OEHHA Hot Spots Guidance. DPM does not have an associated acute HI reference exposure level, so acute HI impacts were not evaluated for the Modified Project.

Thresholds of Significance

Potential air quality impacts from construction of the Modified Project to sensitive receptors were evaluated using the BAAQMD thresholds of significance as follows.

- Increased cancer risk of >10.0 in a million
- Increased non-cancer risk of > 1.0 HI (chronic or acute)

- Ambient PM_{2.5} increase: > 0.3 µg/m³ annual average

According to BAAQMD, the goal of these thresholds is to ensure that no project source creates, or receptor endures, a significant adverse impact from any individual project, and that the total of all nearby directly emitted risk and hazard emissions is also not significantly adverse. The thresholds for local risks and hazards from TAC and PM_{2.5} are intended to apply to all sources of emissions, including both permitted stationary sources and on- and off-road mobile sources, such as sources related to construction, busy roadways, or freight movement. In consideration of the scientific studies and recommendations of the Bay Area Health Directors, these thresholds of significance were adopted by BAAQMD to protect the community from potential risks and hazards.

Operation

The Modified Project would not generate substantial quantities of TACs or HAPs during operation. However, an HRA was prepared to analyze impacts to offsite sensitive receptors.

Operational HRA

The operational HRA (**Appendix M**) conservatively considers potential sources of TACs from the most intense development scenario including traffic generated by Option 2 of the Modified Project, ferry operations, emergency generator use, and WWTP operations. Following applicable BAAQMD guidelines, the operational HRA evaluated the potential health impacts to the maximum potential off-site sensitive receptor. The assumptions used to evaluate operational health impacts from traffic, ferry operations, emergency generators, and WWTP operations are discussed below.

Project-Generated Traffic

The traffic generated by the Modified Project could result in increased cancer risk and PM_{2.5} concentrations at the off-site residences nearest to the roadways where the traffic is added. The BAAQMD Roadway Screening Analysis Calculator was used to evaluate potential health risk impacts for traffic generated by the Modified Project.

Input parameters to the BAAQMD screening tool include Annual Average Daily Traffic (AADT), roadway direction, and distance of the Maximally Exposed Individual Resident (MEIR) to the edge of the roadway. Resulting cancer risks were multiplied by a factor of 1.3744 to account for the revised 2015 OEHHHA Guidance, at the direction of the BAAQMD. The BAAQMD's screening tools do not estimate chronic or acute hazards since the screening levels were found to be extremely low; thus there are no chronic or acute hazard values associated with roadways.

Emergency Generators

Operation of the Modified Project may require up to two diesel-fired, 2,000 kilowatt (2,682 horsepower), Tier 4 emergency generators to support the residential and commercial centers. Any new diesel-fired emergency generator with a rated power of 50 horsepower or more is required to obtain a permit from the BAAQMD.

Ferry Operations

Ferry operations from the Modified Project are assumed to include up to four daily ferry trips servicing Point Molate to the San Francisco Ferry Terminal. For conservative analysis within the HRA, proposed ferry engines were assumed to be certified Tier 2. Potential emissions include DPM from both idling and transit. Diesel exhaust, a complex mixture that includes hundreds of individual constituents, is identified by the State of California as a known carcinogen (Cal/EPA, 1998). Under California regulatory guidelines, DPM is used as a surrogate measure of exposure for the mixture of chemicals that make up diesel exhaust as a whole. Emissions for ferry idling at both berthing locations were modelled as point sources, while transit emissions were modelled as separated volume sources evenly distributed along the ferry route. Potential health impacts from ferry operations were evaluated for the nearest off-site residential areas on both the City of Richmond and City of San Francisco sides of the ferry route. No other sensitive receptors were identified in the vicinity of the Modified Project; however, a school was identified within 1,000 feet of the San Francisco ferry building and was evaluated as a sensitive receptor in this analysis (**Appendix M**).

Waste Water Treatment Plant Operations

Under Wastewater Treatment Variant A described in **Section 3.4.6.2**, the Modified Project is would include operation of an on-site WWTP. The WWTP is assumed to include a 2,000 kilowatt (2,682 horsepower) diesel-fired emergency generator to support operations during a power outage. WWTP operations along with the emergency generator may emit TACs such as DPM, benzene, and toluene. Each process unit, including supporting equipment (e.g., emergency diesel generators, tanks), at wastewater treatment facilities are required to obtain permits with the BAAQMD.

Thresholds of Significance

Potential air quality impacts from operation of the Modified Project to sensitive receptors were evaluated using the BAAQMD thresholds of significance as follows.

- Increased cancer risk of >10.0 in a million
- Increased non-cancer risk of > 1.0 HI (chronic or acute)
- Ambient PM_{2.5} increase: > 0.3 µg/m³ annual average

Odors

Odor analyses typically evaluate the potential for a proposed project to generate odors on the existing environment. Potential odor impacts were evaluated by examining the distances from the proposed odor sources to the existing sensitive receptors. The WWTP that would be constructed under Wastewater Treatment Variant A is considered to be the only new odor source proposed under the Modified Project. The BAAQMD CEQA Guidelines provide odor screening level for various land use. Projects that would site a new odor source farther than the applicable screening distance from an existing receptor, would not likely result in a significant odor impact. The BAAQMD recommended screening distance for a WWTP is 2 miles. The proposed WWTP is located approximately 1 mile from the existing sensitive receptors on Western Drive, therefore additional odor analysis was conducted.

Climate Change

Construction and operational GHG emissions were estimated using CalEEMod using the same assumptions as described above. Under CEQA, GHG impacts are exclusively cumulative impacts because no single project could, by itself, result in a substantial change in climate. (CEQA Guidelines § 15064.4(b); see BAAQMD, 2012; CAPCOA, 2008). Therefore, the evaluation of cumulative GHG impacts presented below evaluates whether the Modified Project would make a considerable contribution to cumulative climate change effects.

The 2017 BAAQMD CEQA Guidelines provide the following thresholds of significance related to operational GHG emissions.

- 1,100 MT of CO₂e/year; or
- 4.6 MT CO₂e/service population (residents + employees)/year; or
- Compliance with Qualified GHG Reduction Strategy

As noted above, the BAAQMD has not updated its quantitative GHG emission thresholds since 2010, and therefore the City has chosen not to rely on them. There is no other applicable regulatory guidance for setting quantitative GHG emission thresholds. In the absence of such guidance, the City has chosen to set the threshold at zero MT of CO₂e/year for this Draft SEIR; in other words, any net emission of GHGs will be considered a cumulatively considerable contribution in this Draft SEIR. Potential impacts to climate change are also analyzed by evaluating the Modified Project's consistency with the City's Climate Action Plan.

4.2.5.3 Effects Found Not to be Significant Without Further Analysis

The potential air quality and climate change impacts from development of the Modified Project are fully analyzed below.

4.2.5.4 Project-Level Impacts

IMPACT 4.2.1	CONFLICT WITH OR OBSTRUCT IMPLEMENTATION OF THE APPLICABLE AIR QUALITY PLAN
Significance Before Mitigation	Potentially Significant
Mitigation Measures	Modified Project Mitigation: MM 4.2-1, MM 4.2-2 Bay Trail IS/MND Mitigation: AQ-1
Significance After Mitigation	Less than Significant
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

The most recently adopted air quality plan in the SFBAAB is the BAAQMD's 2017 Clean Air Plan (BAAQMD, 2017a). The 2017 Clean Air Plan is a roadmap showing how the Bay Area will achieve compliance with the State 1-hour O₃ standard as expeditiously as practicable, and how the region will reduce transport of O₃ and O₃ precursors to neighboring air basins. The control strategy includes stationary source control measures to be implemented through BAAQMD regulations; mobile source

control measures to be implemented through incentive programs and other activities; and transportation control measures to be implemented through transportation programs in cooperation with the MTC, local governments, transit agencies, and others. The 2017 Clean Air Plan also represents the Bay Area's most recent triennial assessment of the region's strategy to attain the State 1-hour O₃ standard.

BAAQMD guidance states that "if approval of a project would not result in significant and unavoidable air quality impacts, after the application of all feasible mitigation, the project would be considered consistent with the (2017 Air Plan)" (BAAQMD, 2017a). As indicated in the discussion below (**Impact 4.2.3**), the Modified Project would not result in significant and unavoidable air quality impacts during operation, after implementation of mitigation measures included in **Section 4.2.6**. Therefore, based on BAAQMD guidance, the Modified Project may be considered consistent with the 2017 Air Plan (the applicable air quality plan). This would be a less-than-significant impact.

Construction of the Bay Trail

Impacts from the construction and implementation of the Bay Trail are analyzed within the San Francisco Bay Trail at Point Molate Initial Study/Mitigated Negative Declaration (IS/MND), which is incorporated by reference, as described within **Section 1.4.4**. The Bay Trail IS/MND determined that impacts from the construction of the Bay Trail conflicting with or obstructing implementation of the applicable air quality plan were less than significant because implementation of the Bay Trail would not result in long-term increases of mobile-source emissions, nor would short-term construction-generated emissions be projected to exceed applicable thresholds of significance. As a result, construction of the Bay Trail would not conflict with or obstruct implementation of the applicable air quality plan due to its below applicable threshold emissions; thus the impact is less than significant.

IMPACT 4.2.2	GENERATE CONSTRUCTION RELATED EMISSIONS RESULTING IN A CUMULATIVELY CONSIDERABLE NET INCREASE OF ANY CRITERIA AIR POLLUTANT FOR WHICH THE PROJECT REGION IS NONATTAINMENT UNDER AN APPLICABLE FEDERAL OR STATE AMBIENT AIR QUALITY STANDARD
Significance Before Mitigation	Less Than Significant
Mitigation Measures	Modified Project Mitigation: MM 4.2-1 Bay Trail IS/MND Mitigation: AQ-1
Significance After Mitigation	Less Than Significant
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

Construction emissions for the Modified Project and the WWTP were estimated using CalEEMod. Unmitigated construction emission totals for the Modified Project Residential-Heavy Option are shown in **Table 4.2-4**. Construction emission totals for the Modified Project Commercial-Heavy Option are shown in **Table 4.2-5**.

TABLE 4.2-4
UNMITIGATED RESIDENTIAL-HEAVY (OPTION 1) CONSTRUCTION EMISSIONS

Category	Criteria Air Pollutants					
	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
	(lbs/day)					
Project	15	28	44	0.18	0.24	0.22
WWTP	0.17	1.9	6.6	0.017	0.017	0.017
Total	15	30	51	0.20	0.26	0.24
<i>BAAQMD Threshold</i>	<i>54</i>	<i>54</i>	<i>-</i>	<i>-</i>	<i>82</i>	<i>54</i>
Above Threshold?	No	No	N/A	N/A	No	No
Notes: Some totals may not add up exactly due to rounding. Source: Appendix M.						

TABLE 4.2-5
UNMITIGATED COMMERCIAL-HEAVY (OPTION 2) CONSTRUCTION EMISSIONS

Category	Criteria Air Pollutants					
	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
	(lbs/day)					
Project	13	29	41	0.17	0.23	0.22
WWTP	0.17	1.9	6.6	0.017	0.017	0.017
Total	13	30	48	0.19	0.25	0.23
<i>BAAQMD Threshold</i>	<i>54</i>	<i>54</i>	<i>-</i>	<i>-</i>	<i>82</i>	<i>54</i>
Above Threshold?	No	No	N/A	N/A	No	No
Notes: Some totals may not add up exactly due to rounding. Source: Appendix M.						

As shown in **Table 4.2-4** and **Table 4.2-5**, the unmitigated emissions associated with construction of the Modified Project under both the Residential-Heavy and Commercial-Heavy Options would be below the BAAQMD CEQA thresholds of significance for ROG, NO_x, PM_{2.5}, and PM₁₀. The BAAQMD's approach to analysis of construction-related particulate impacts (other than exhaust PM) is to emphasize implementation of effective and comprehensive dust control measures rather than detailed quantification of emissions. The BAAQMD considers construction-related fugitive dust impacts of projects to be less than significant if a suite of recommended dust-control measures are implemented. Therefore, BAAQMD-identified Best Management Practices for control of fugitive dust are included as **Mitigation Measure 4.2-1**. Therefore, construction of the Modified Project would not result in a cumulatively considerable net increase of any CAP for which the Modified Project region is nonattainment under an applicable federal or State ambient air quality standard. Construction of the Modified Project would have a less-than-significant impact on air quality.

Construction of the Bay Trail

Impacts as a result of the construction and implementation of the Bay Trail are analyzed within the Bay Trail IS/MND, which is incorporated by reference, as described within **Section 1.4.4**. The Bay Trail IS/MND determined that CAP impacts from the construction of the Bay Trail were less than significant after mitigation. The Bay Trail IS/MND identified **Mitigation Measure AQ-1**, described in **Section 4.2.6**, that would reduce the impacts to less than significant by requiring the Bay Trail to comply with the

BAAQMD Basic Construction Mitigation Measures, ensuring that generated emissions would not exceed applicable BAAQMD significance thresholds. As a result of the construction of the Bay Trail and implementation of **Mitigation Measure AQ-1**, CAP impacts related to construction would be less than significant with mitigation.

IMPACT 4.2.3	GENERATE OPERATIONAL RELATED EMISSIONS IN A CUMULATIVELY CONSIDERABLE NET INCREASE OF ANY CRITERIA AIR POLLUTANT FOR WHICH THE PROJECT REGION IS NON-ATTAINMENT UNDER AN APPLICABLE FEDERAL OR STATE AMBIENT AIR QUALITY STANDARDS
Significance Before Mitigation	Significant
Mitigation Measures	Modified Project Mitigation: MM 4.2-2
Significance After Mitigation	Significant and Unavoidable
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

Buildout of the Modified Project would result in the generation of mobile emissions from patron, employee, and delivery vehicles and area and energy emissions from the combustion of natural gas in stoves, fireplaces, and other equipment, such as landscape equipment, on the Project Site. Operational emissions including area, energy, mobile, stationary, waste, and water-related emissions were estimated using CalEEMod. Operational emissions for the Modified Project Residential-Heavy Option are shown in **Table 4.2-6**. Operational emissions for the Modified Project Commercial-Heavy Option are shown in **Table 4.2-7**. Emission levels after mitigation are listed first, and emissions before mitigation are shown in parentheses. Refer to **Appendix AQ** for CalEEMod input and output files.

As shown in **Table 4.2-6** and **Table 4.2-7**, unmitigated emissions associated with operation of the Modified Project under both the Residential-Heavy and Commercial-Heavy options would be below the BAAQMD CEQA thresholds of significance for PM_{2.5}, and PM₁₀. However, operational emissions of ROG and NO_x would exceed the BAAQMD CEQA thresholds of significance under both options. This would be a cumulatively considerable contribution to the air basin's significant cumulative ozone impact.

Mitigation Measure 4.2-2 would reduce operational emissions through implementation of super-compliant architectural coatings, energy efficient appliances, electric water heaters, low-flow water fixtures, and more fuel-efficient ferries. As shown in the tables above, mitigated emissions associated with operation of the Modified Project under both the Residential-Heavy and Commercial-Heavy Options would be below the BAAQMD CEQA thresholds of significance for ROG and NO_x.

TABLE 4.2-6
MITIGATED (UNMITIGATED) RESIDENTIAL-HEAVY (OPTION 1) OPERATIONAL EMISSIONS

Category	Criteria Air Pollutants					
	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
	(lbs/day)					
Area	37 (45)	0.71 (0.71)	0.31 (0.31)	0.005 (0.005)	0.058 (0.058)	0.058 (0.058)
Energy - Electricity	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Energy - Natural Gas	0.8 (0.8)	7.2 (7.2)	3.5 (3.5)	0.046 (0.046)	0.58 (0.58)	0.58 (0.58)
Mobile	14 (16)	28 (33)	139 (165)	0.41 (0.49)	25 (29)	7.3 (8.4)
Stationary	0.18 (0.18)	0.59 (0.59)	3.1 (3.1)	0.006 (0.006)	0.024 (0.024)	0.024 (0.024)
Waste	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Water	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Ferry	0.78 (3.3)	14 (23)	14 (14)	0.015 (0.015)	0.17 (0.83)	0.17 (0.83)
WWTP	0.29 (0.29)	0.50 (0.50)	2.1 (2.1)	0.0051 (0.0051)	0.12 (0.12)	0.046 (0.046)
Total	52 (65)	52 (65)	162 (189)	0.49 (0.57)	26 (30)	8.2 (10)
<i>BAAQMD Threshold</i>	<i>54</i>	<i>54</i>	<i>-</i>	<i>-</i>	<i>82</i>	<i>54</i>
Above Threshold?	No (Yes)	No (Yes)	N/A	N/A	No (No)	No (No)
Notes: Some totals may not add up exactly due to rounding. Source: Appendix M.						

Mitigation Measure 4.2-2 is expected to reduce the CAP emissions impacts of the Modified Project to a less-than-significant level. However, whether **Mitigation Measure 4.2-2 (h)** is feasible is outside the control of the Modified Project Applicant. Tier 4 engines are increasingly the industry standard for water taxis and ferries, and it is reasonable to assume that vessels utilizing this technology will be widely available at the time when ferry service for the Modified Project is implemented. However, the Project Applicant cannot guarantee the availability of such vessels. Furthermore, there are uncertainties related to permitting and regulation of future ferry service. A ferry-service provider, such as Water Emergency Transportation Authority or another California Public Utilities Commission-approved private ferry/ water taxi services provider, would need to be involved in final implementation of **Mitigation Measure 4.2-2 (h)**, and that entity would be subject to oversight and regulation outside by third-party agencies. Accordingly, although **Mitigation Measure 4.2-2 (h)** will likely render operational emissions less than significant, due to the uncertainty discussed above, in an abundance of caution, this impact shall remain significant and unavoidable. (See **Tables 4.2-6** and **4.2-7**).

TABLE 4.2-7
MITIGATED (UNMITIGATED) COMMERCIAL-HEAVY (OPTION 2) OPERATIONAL EMISSIONS

Category	Criteria Air Pollutants					
	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
	(lbs/day)					
Area	34 (41)	0.71 (0.71)	0.31 (0.31)	0.0045 (0.0045)	0.058 (0.058)	0.058 (0.058)
Energy - Electricity	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Energy – Natural Gas	1.0 (1.0)	9.1 (9.1)	5.6 (5.6)	0.1 (0.1)	0.7 (0.7)	0.7 (0.7)
Mobile	13 (15)	27 (32)	126 (161)	0.37 (0.48)	25 (28)	7.2 (8.3)
Stationary	0.18 (0.18)	0.59 (0.59)	3.1 (3.1)	0.0058 (0.0058)	0.024 (0.024)	0.024 (0.024)
Waste	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Water	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Ferry ¹	0.78 (3.3)	14 (23)	14 (14)	0.015 (0.015)	0.17 (0.83)	0.17 (0.83)
WWTP ²	0.29 (0.29)	0.50 (0.50)	2.1 (2.1)	0.0051 (0.0051)	0.12 (0.12)	0.046 (0.046)
Total	49 (61)	52 (66)	151 (186)	0.46 (0.57)	26 (30)	8.2 (10)
<i>BAAQMD Threshold</i>	54	54	-	-	82	54
Above Threshold?	No (Yes)	No (Yes)	N/A	N/A	No (No)	No (No)
Notes: Some totals may not add up exactly due to rounding. Source: Appendix M.						

Health Impacts from CAP Emissions

The evaluation presented herein serves to describe the potential health effects of ozone and PM_{2.5} for the Modified Project (under both the Options). This evaluation does not make a new significance determination. Instead, this evaluation provides additional information regarding the potential health effects of the previously identified cumulatively considerable contribution to ozone and PM_{2.5} from operation of the Modified Project.

Potential Health Effects

Potential health effects from CAPs were evaluated based on the estimated incidence rate of health effects measured in the local population with the addition of emissions from the Modified Project. Overall, the estimated health effects from the Modified Project's contribution to cumulative ozone and PM_{2.5} are negligible in light of background incidences. Specifically, for all the health endpoints quantified, the number of estimated incidences is less than or equal to 0.001 percent of the background health

incidences. The “background health incidence” is the actual incidence of health effects as measured in the local population in the absence of additional emissions from the Modified Project. When taken into context, the *de minimis* increase in incidences and the very small percent of the number of background incidences indicate that these health effects are negligible in a developed, urban environment. (**Appendix M**).

PM_{2.5}-related health effects attributed to Project-related increases in ambient air concentrations included asthma-related emergency room visits (0.29 incidences per year), asthma-related hospital admissions (0.02 incidences per year), all cardiovascular-related hospital admissions (not including myocardial infarctions) (0.05 incidences per year), all respiratory-related hospital admissions (0.11 incidences per year), mortality (0.59 incidences per year), and nonfatal acute myocardial infarction (less than 0.03 incidences per year for all age groups). (**Appendix M**).

Ozone-related health effects attributed to Modified Project-related increases in ambient air concentrations included respiratory-related hospital admissions (0.09 incidences per year), mortality (0.05 incidences per year), and asthma-related emergency room visits for any age range (lower than 0.70 incidences per year for all age groups). These are negligible increases, particularly in light of background incidences. (**Appendix M**).

IMPACT 4.2-4	EXPOSE SENSITIVE RECEPTORS TO SUBSTANTIAL POLLUTANT CONCENTRATIONS FROM CONSTRUCTION
Significance Before Mitigation	Potentially Significant
Mitigation Measures	Modified Project Mitigation: MM 4.2-6
Significance After Mitigation	Less Than Significant
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

As shown in **Table 4.2-8**, the maximum cancer risk from construction activities is calculated to be 2.3 in 1 million, compared to the BAAQMD threshold of 10 in 1 million. Construction activities would also result in a non-cancer HI of 0.002 (threshold of 1.0), and maximum PM_{2.5} concentration of 0.010 µg/m³ (threshold of 0.3 µg/m³). The location of the MEIR is shown in Figure 5 of the Construction HRA in **Appendix M**. These results are all below the BAAQMD thresholds of significance; thus, construction of the Modified Project would not expose sensitive receptors to substantial pollutant concentrations and the health risk impacts associated with construction of the Modified Project are less than significant.

TABLE 4.2-8
CONSTRUCTION HRA RESULTS

Receptor Type	Maximum Cancer Risk	Maximum PM _{2.5} Concentration	Maximum Chronic HI
	(in a million)	(µg/m ³)	(unitless)
Offsite	0.5	0.002	0.0004
Onsite – Planning Area A	2.2	0.006	0.001
Onsite – Planning Area B	2.0	0.005	0.001
Onsite – Planning Area C	2.0	0.005	0.001
Onsite – Planning Area D	0.9	0.003	0.0005
Onsite – Planning Area E	0.5	0.002	0.0003
Onsite – Planning Area F	2.3	0.008	0.002
Onsite – Planning Area G	1.7	0.010	0.002
Construction Risk at MEIR	2.3	0.010	0.002
<i>BAAQMD Threshold</i>	<i>10</i>	<i>0.3</i>	<i>1</i>
Above Threshold?	No	No	No
Source: Appendix M.			

Potential VOCs in Disturbed Soil

The Phase I Environmental Site Assessment (Phase I) prepared for the Modified Project determined that there are potential VOCs in the soil at the Project Site that may be disturbed by construction activities (**Appendix G**). Excavation for construction at locations where there are VOCs in the soil could result in exposures to VOCs for off-site sensitive receptors. According to the Phase I, chemicals that could become TACs if airborne, including benzene, were found in the VOCs at the Project Site.

The San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) required the preparation of a Soil and Groundwater Management Plan (SGWMP). The SGWMP allows for and describes the protocols required in order to complete soil disturbance and building demolition activities at the Project Site. Examples of activities covered by the SGWMP include, but are not limited to, landscaping, installing and maintaining utilities, grading, trenching, installing deep foundations, drilling borings for subsurface exploration or monitoring well installation, demolishing buildings, and constructing subsurface structures.

The SGWMP covers all portions of the Project Site except for Installation Restoration (IR) Site 3 and IR Site 4, which are currently undergoing site-specific remediation activities. Recent remedial activities at IR Site 3 will require the SGWMP to be amended to incorporate specific requirements for activities conducted in IR Site 3, however, as of the writing of the Phase I, these amendments to the SGWMP had not been completed.

The SGWMP was prepared as a mitigation measure for the 2011 FEIR. In addition, it was completed in response to Task 2 of SFBRWQCB Order #R2-2011-0087, which states: “The Discharger shall propose a Soil and Groundwater Management Plan [SGWMP] for the Facility, acceptable to the Executive Officer,

identifying how soils and affected groundwater will be managed for any phase of cleanup activities at the Facility, including initial cleanup as well as cleanups related to discoveries during any future development of the Facility.” The SGWMP is designed to ensure the safety of all individuals that may come into contact with the chemicals currently in the soils at the Project Site and the existing community. SGWMP measures designed to protect the existing community include:

- Health and safety protocols including air and dust monitoring
- Specific training for some on-site construction workers
- Notification procedures with the RWQCB
- Soil, groundwater, and building material characterization procedures
- Soil stockpiling procedures
- Dust control procedures
- Decontamination procedures
- Stormwater management procedures
- Asbestos and lead-based paint abatement procedures
- Waste management procedures

Accordingly, with implementation of the SGWMP, ground disturbance would pose *de minimis* risks to the existing community resulting in less than significant impacts. Refer to **Section 4.7**, Hazards, Hazardous Materials, and Wildfire, and **Mitigation Measure 4.2-6** for details of the SGWMP.

Construction of the Bay Trail

Impacts as a result of the construction and implementation of the Bay Trail are analyzed within the Bay Trail IS/MND, which is incorporated by reference, as described within **Section 1.4.4**. The Bay Trail IS/MND determined that impacts from the construction of the Bay Trail on exposing sensitive receptors to substantial pollutant concentrations were less than significant because construction activities would be both temporary and would produce only potential short-term exposure. As a result, construction of the Bay Trail would not result in exposing sensitive receptors to substantial pollutant concentrations due to temporary short-term exposures and the impact would be less than significant.

IMPACT 4.2-5	EXPOSE SENSITIVE RECEPTORS TO SUBSTANTIAL POLLUTANT CONCENTRATIONS FROM OPERATION
Significance Before Mitigation	Potentially Significant
Mitigation Measures	Modified Project Mitigation: MM 4.2-7
Significance After Mitigation	Less Than Significant
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

Project-Generated Traffic

For potential on-site impacts, the AADT generated by the Modified Project is about 10,980 (residential heavy option) and is assumed to all travel through Stenmark Drive which runs in a north-south direction along the Project Site. The MEIR is assumed to be 20 ft. from the edge of the roadway (on the eastern side), based on the shortest distance to existing buildings.

For potential off-site impacts, the nearest off-site sensitive receptor to the roadway was evaluated, as shown in Figure 1 of the Operational HRA in **Appendix M**. Risks from project operational traffic assume 49 percent of total Modified Project traffic (10,980 AADT) to be allocated to Interstate 580 (I-580) (41 percent for I-580 volume and 8 percent for nearby local traffic), based on the Modified Project traffic study. I-580 travels in the east-west direction, with the off-site MEIR located 100 ft. to the south.

Potential risks from traffic generated by the Modified Project are summarized in Table 1 of the Operational HRA in **Appendix M**. As shown in Table 1 of the Operational HRA in **Appendix M**, the maximum cancer risk from Modified Project-generated traffic is calculated to be 6.4 in 1 million at the on-site MEIR and 1.4 in 1 million at the off-site MEIR (threshold of 1.0). Modified Project-generated traffic would also result in a maximum PM_{2.5} concentration of 0.12 µg/m³ at the on-site MEIR and 0.03 µg/m³ at the off-site MEIR (threshold of 0.3 µg/m³). Therefore, potential risks from Modified Project-generated traffic are below BAAQMD significance thresholds. This would be a less-than-significant impact.

Carbon Monoxide Hot Spot

Operation of the Modified Project has the potential to cause increased concentrations of CO from mobile sources. CO is a localized pollutant of concern, CO concentration levels are highest near intersections with congested slow or idling traffic where the LOS is E or F. The Modified Project would increase traffic volumes at intersections within the project site vicinity. An analysis of intersections in the vicinity of the project site is provided in **Section 4.13** and **Appendix D**.

As shown in the TIA, traffic would worsen the LOS at several intersections from A, B, C, or D to LOS E or F or increase the peak hour volumes by more than one percent at already failing intersections. As described in **Section 4.13**, the following intersections would exceed acceptable LOS standards due to the Proposed Project:

- Intersection #1 (Castro Street and the I-580 WB Off-Ramps/Chevron®),
- Intersection #24 (Blume Drive/I-80 WB Ramps and Richmond Parkway),
- Intersection #27 (Stenmark Drive and Dutra Materials), and
- Intersection #29 (Richmond Parkway and Goodrick Avenue)

The TIA proposes various mitigation measures for these intersections that would reduce delay and improve operational conditions during all project phases. However, the impacts at Intersection #1, Intersection #24, and Intersection #29 would remain significant and unavoidable. Therefore, further quantitative screening for CO impacts was performed.

CO is further evaluated using a quantitative screening methodology recommended by the BAAQMD. The BAAQMD recommended screening methodology states that a Modified Project would result in a less-than-significant impact to air quality for local CO if the following criteria are met:

- The Proposed Project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, regional transportation plan, and local congestion management agency plans;

- The Proposed Project would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour; and
- The project traffic would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway).

As shown in **Appendix D**, the maximum peak hour traffic volumes would be well below 44,000 at all intersections, including Intersections #1, #24, and #29. There are no facilities in the vicinity of Intersections #1, #24, and #29 that would limit the mixing of air and the mix of vehicles at the intersection will be the same with the implementation of the Modified Project. Also, because of stricter vehicle emissions standards in newer cars, new technology, and increased fuel economy, future CO emissions would be substantially lower than those under the existing conditions. Thus, even though the Modified Project would increase vehicle trips and delay at Intersections #1, #24, and #29, project-generated local mobile-source CO emissions would not result in or substantially contribute to concentrations that exceed the 1-hour or 8-hour ambient air quality standards for CO. As a result, this impact would be less than significant and no mitigation has been identified.

Ferry Operations

As shown in Table 5 of the Ferry HRA in **Appendix M**, the maximum cancer risk from ferry operations is calculated to be 2.0 in 1 million, compared to the BAAQMD's threshold of 10 in 1 million. Ferry operations would also result in a non-cancer HI of 0.001 (threshold of 1.0), and a maximum PM_{2.5} concentration of 0.003 µg/m³ (threshold of 0.3 µg/m³). The location of the MEIR, located on the City side of the transit route, is shown in Figure 4a of the Ferry HRA in **Appendix M**. While the MEIR on the San Francisco side of the transit route has a lower calculated risk than the on-site receptor, the location of this receptor is shown for reference in Figure 4b of the Ferry HRA in **Appendix M**. These results are all below the BAAQMD thresholds of significance; thus, health risk impacts associated with the Modified Project's ferry operations are less than significant.

Emergency Generators

In accordance with BAAQMD Regulations 2-1 and 2-5, new sources of emissions must implement Best Available Control Technology for Toxics (T-BACT) if individual source risks exceed 1.0 in a million for cancer and/or chronic HI is greater than 0.20. Additionally, a permit would be denied if Modified Project cancer risk exceeds 10.0 in a million or if chronic or acute HI exceeds 1.0. Compliance with BAAQMD rules, identified under **Mitigation Measure 4.2-7**, will ensure that new emergency generators will not result in a significant impact.

Wastewater Treatment Plant Operations

In accordance with Regulations 2-1 and 2-5, new sources of emissions must implement T-BACT if individual source risks exceed 1.0 in a million for cancer and/or a chronic HI greater than 0.20. Additionally, a permit would be denied if Modified Project cancer risk exceeds 10.0 in a million or if chronic or acute HI exceeds 1.0. Compliance with BAAQMD rules, identified under **Mitigation Measure 4.2-7**, would ensure that the installation and operation of a WWTP would not result in a significant impact.

IMPACT 4.2.6	RESULT IN OTHER EMISSIONS (SUCH AS THOSE LEADING TO ODORS) ADVERSELY AFFECTING A SUBSTANTIAL NUMBER OF PEOPLE
Significance Before Mitigation	Potentially Significant
Mitigation Measures	Modified Project Mitigation: MM 4.2-8
Significance After Mitigation	Less Than Significant
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

Under Wastewater Treatment Variant A, the Modified Project would include the installation and operation of a package tertiary WWTP onsite to treat all of the wastewater generated by the Modified Project. Operation of the WWTP could introduce substantial odors to existing sensitive receptors. The existing residences, located approximately 1 mile south of the Project Site, fall within the 2-mile screening distance for WWTPs recommend by BAAQMD. Therefore, operation of the WWTP under the Modified Project could result in potentially significant odor impacts. Implementation of **Mitigation Measure 4.2-8** would reduce the potential impact to a less-than-significant level.

Construction of the Bay Trail

Impacts as a result of the construction and implementation of the Bay Trail are analyzed within the Bay Trail IS/MND, which is incorporated by reference, as described within **Section 1.4.4**. The Bay Trail IS/MND determined that impacts from the construction of the Bay Trail resulting of other emissions adversely affecting a substantial number of people were less than significant because construction-related emissions would occur intermittently throughout the workday and would dissipate rapidly with increasing distance from the source. As a result, construction of the Bay Trail would not result in other emissions adversely affecting a substantial number of people and the impact would be less than significant.

Cumulative Impacts

IMPACT 4.2.7	GENERATE GREENHOUSE GAS EMISSIONS, EITHER DIRECTLY OR INDIRECTLY, THAT MAY HAVE A SIGNIFICANT IMPACT ON THE ENVIRONMENT
Significance Before Mitigation	Potentially Significant
Mitigation Measures	Modified Project Mitigation: MM 4.2-1, MM 4.2-2, MM 4.2-5
Significance After Mitigation	Significant and Unavoidable
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

The Modified Project would generate GHG emissions from a variety of sources, including construction and operation of the Modified Project.

Construction Emissions

Construction GHG emissions from the Modified Project were estimated using the CalEEMod emissions model. Sources would include fossil fuel combustion by construction vehicles and equipment. Construction-related GHG emissions are presented in **Table 4.2-9**. All model inputs and output are provided in **Appendix M**. The total emissions from construction of the Residential-Heavy Scenario are 24,039 MT of CO₂e. The total emissions from construction of the Commercial-Heavy Scenario are 22,258 MT of CO₂e. These emissions account for the Modified Project's air quality mitigation measures, which are discussed above.

As discussed earlier, BAAQMD has not established a quantitative threshold relative to construction-related emissions. Accordingly, construction emissions are annualized over the estimated life of the Modified Project and added to operational emissions.

TABLE 4.2-9
CONSTRUCTION GHG EMISSIONS

Category	Residential-Heavy Scenario	Commercial-Heavy Scenario
	CO ₂ e (MT)	
Project	24,035	22,254
WWTP	4.4	4.4
Total	24,039	22,258
Amortized over 30 years	801	742
Source: Appendix M .		

Operational Emissions

Operational GHG emissions associated with the Modified Project would result from electrical and natural gas usage, water and wastewater transport (the energy used to pump water and wastewater to and from the Project Site), and solid waste generation. GHG emissions from electrical usage would be generated when energy consumed on the Project Site is generated by the electrical supplier, PG&E. GHG emissions from natural gas are direct emissions resulting from on-site combustion for heating and other purposes. GHG emissions from water and wastewater transport are also indirect emissions resulting from the energy required to transport water from its source, and the energy required to treat wastewater and transport it to its treated discharge point. Solid waste-related emissions are generated when the increased waste generated by a project is disposed in a landfill where it decomposes, producing CH₄ gas. Maintenance operations of backup generators, presumed to potentially be required for the taller condominium buildings, would also result in direct GHG emissions. GHG emissions from electrical usage, natural gas combustion, mobile transportation, water and wastewater conveyance, solid waste, and WWTP operations were estimated using CalEEMod. GHG emissions from ferry operations were estimated using GHG emission factors for harbor craft vessels based on the April 2009 USEPA report

titled *Current Methodologies in Preparing Mobile Source Port-Related Emission Inventories* (USEPA, 2009). GHG emissions are presented in **Table 4.2-10**.

TABLE 4.2-10
MITIGATED (UNMITIGATED) OPERATIONAL GHG EMISSIONS

Category	Residential-Heavy Scenario	Commercial-Heavy Scenario
	CO ₂ e (MT/year)	
Area	151 (151)	151 (151)
Energy – Electricity	867 (884)	1,373 (1,381)
Energy – Natural Gas	1,517 (1,517)	1,873 (1,873)
Mobile	6,951 (8,256)	6,380 (8,080)
Stationary	102 (102)	102 (102)
Waste	301 (603)	353 (705)
Water	243 (299)	339 (417)
Ferry	477 (477)	477 (477)
WWTP	257 (257)	257 (257)
Annualized Construction	801	742
Total (MT CO₂e/year)	11,667 (13,346)	12,046 (14,184)
Source: Appendix M .		

As shown in **Table 4.2-10**, under both scenarios the Modified Project would result in unmitigated GHG emissions in excess of the zero GHG threshold described above. Therefore, operational GHG emissions would be potentially significant. Implementation of **Mitigation Measure 4.2-2** and **Mitigation Measure 4.2-5** would further reduce GHG emissions during Modified Project operation. However, GHG emissions associated with the Modified Project would remain cumulatively considerable (significant and unavoidable).

While **Mitigation Measure 4.2-5** requires preparation of a Greenhouse Gas Reduction Plan (GGRP) to bring the Modified Project's GHG emission to zero MT/CO₂e, the GGRP will necessarily have to rely on purchase of carbon offset credits outside the SFBAAB. Requiring the Modified Project proponent to purchase offsets from entirely within the SFBAAB is considered infeasible due to the unavailability of such offsets as the current estimated offset demand is far greater than the available supply of offsets within the SFBAAB. Offsets that originate outside of the SFBAAB are therefore necessary to meet the demand and reduce GHG emissions.

Further, given the length of the construction period, the Modified Project would be required to purchase offsets throughout the life of the project, over a period of approximately next 30 years. There is a limited supply of "verifiable, reliable, real" carbon offsets currently, and there is no way to ensure that adequate offset credits will be available throughout the life of the Modified Project, particularly in light of the significant number of projects throughout the state of California that are similarly relying on purchase of offsets to mitigate GHG emissions. The availability of offsets is outside the control of the Project

proponent. Thus, purchase of offsets for the life of the Modified Project is not guaranteed to occur, and therefore cannot be considered feasible. Accordingly, despite the fact that this EIR requires the Project proponent to purchase local credits to the extent available, and out-of-basin credits beyond that, to mitigate Modified Project emissions to a less-than-significant level, this impact is being deemed significant and unavoidable—in an abundance of caution—due to the uncertainty regarding availability of offset credits.

Construction of the Bay Trail

Impacts as a result of the construction and implementation of the Bay Trail are analyzed within the Bay Trail IS/MND, which is incorporated by reference, as described within **Section 1.4.4**. The Bay Trail IS/MND determined that impacts from the construction of the Bay Trail in generating GHG emissions that may have a significant impact on the environment were less than significant because construction-related emissions would be both minimal and temporary. Additionally, the Bay Trail is for non-motorized pedestrian use only, resulting in no long-term increases of GHG emissions. As a result, construction of the Bay Trail would not result in generating GHG emissions that would make a cumulatively considerable contribution on the environment, thus the impact is less than cumulatively considerable.

IMPACT 4.2.8	CONFLICT WITH AN APPLICABLE PLAN, POLICY OR REGULATION ADOPTED FOR THE PURPOSE OF REDUCING THE EMISSIONS OF GREENHOUSE GASES
Significance Before Mitigation	Potentially Significant
Mitigation Measures	Modified Project Mitigation: MM 4.2-2; MM 4.2-3; MM 4.2-4, MM 4.2-5
Significance After Mitigation	Less Than Significant
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

The Energy and Climate Change Element of the City's General Plan includes goals, policies, and actions that are relevant to GHG emissions and energy consumption from land use development within the City. These goals and policies are individually identified in **Appendix L** and an assessment is made as to whether these goal and policies are reasonably applicable to the Modified Project. If applicable, a determination is made as to whether the Modified Project is consistent with the intent of the policy or action and if not what measures may be available to ensure consistency and avoid a potential significant impact with regard to conflicts with a plan established for the purposes of reducing GHG emissions. As shown in **Appendix L**, the Modified Project is consistent with of the applicable goals and policies of the General Plan Energy and Climate Change Element. Per the discussion in **Appendix L**, the City will also consider implementation of **Mitigation Measure 4.2-2** to further the goals of the Energy and Climate Change Element.

New construction developed under the Modified Project would comply with the latest Title 24 buildings standards in effect at the time of construction. The current Title 24 standards require solar photovoltaic systems on all new homes that are three stories or lower. **Mitigation Measures 4.2-3** and **4.2-4** would

require installation of EV charges in both residential and commercial as required by Title 24 standards. Therefore, the Modified Project would be consistent with all Title 24 requirements.

As discussed above, Plan Bay Area 2040, the state-mandated SCS for the Bay Area, integrates long-range transportation and land use planning with the State GHG reduction targets set by CARB. The stated goals of Plan Bay Area 2040 include climate protection, adequate housing, and transportation system effectiveness. In addition to the mitigation measures described above, implementation of **Mitigation Measure 4.2-5** would require the Modified Project to implement a GHG Reduction Plan to achieve a net zero increase in GHG emissions. Additionally, as described in **Section 3.0** and **Section 4.13**, the Modified Project would provide additional housing to the region and increase access to transit, bicycle and pedestrian facilities. Therefore, the Modified Project will be consistent with the goals and policies of Plan Bay Area 2040.

Appendix O also includes a discussion of the Modified Project's compliance with the policies added as part of the Bay Plan Amendment in 2019 regarding climate change and its effect on rising sea level. Development of the Modified Project would also be subject to applicable policies in the City's Climate Action Plan adopted by the City on October 25, 2016. The City's Climate Action Plan includes strategies, performance goals, and actions that are relevant to GHG emissions and energy consumption from land use development within the City. These strategies are individually identified in **Appendix N** and an assessment is made as to whether the climate action plan strategies are reasonably applicable to the Modified Project, and whether the Modified Project is consistent with each strategy. As shown in **Appendix N**, the Modified Project is consistent with all applicable climate action plan strategies after implementation of **Mitigation Measure 4.2-2**. Therefore, the Modified Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. This impact would be less than significant.

Construction of the Bay Trail

Impacts as a result of the construction and implementation of the Bay Trail are analyzed within the Bay Trail IS/MND, which is incorporated by reference, as described within **Section 1.4.4**. The Bay Trail IS/MND determined that impacts from the construction of the Bay Trail conflicting with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs were less than significant because construction-related emissions would be both minimal and temporary, with an approximate 6-month construction timeframe. Additionally, excessive idling of trucks or equipment during construction would not be allowed. As a result, construction of the Bay Trail would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs and the impact would be, therefore, less than significant.

4.2.6 MITIGATION MEASURES

4.2.6.1 Modified Project

Review of the mitigation measures identified in the 2011 FEIR determined that some measures required revisions or were not applicable to the Modified Project. It was determined that several of the mitigation

measures that were identified in the 2011 FEIR are no longer applicable in regards to air quality and global climate change for the Modified Project; however, new and more relevant mitigation measures will be implemented and are addressed below. **Appendix K** provides a summary of whether each mitigation measure from the 2011 FEIR was revised, deleted, or kept as is and the reasoning for that determination.

Mitigation Measure 4.2-1 Construction Emissions

The following measures would be implemented by the Modified Project to reduce emissions of CAPs, GHG, and DPM from construction, consistent with the BAAQMD-identified Best Management Practices.

- MM 4.2-1 (a)** All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- MM 4.2-1 (b)** All haul trucks transporting soil, sand, or other loose material offsite shall be covered.
- MM 4.2-1 (c)** All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- MM 4.2-1 (d)** All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.
- MM 4.2-1 (e)** All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- MM 4.2-1 (f)** Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, § 2485 of California Code of Regulations). Clear signage shall be provided for construction workers at all access points.
- MM 4.2-1 (g)** All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- MM 4.2-1 (h)** A publicly visible sign shall be posted with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The applicable air district's phone number shall also be visible to ensure compliance with applicable regulations.

Additionally, the following measures would be implemented by the Modified Project to reduce emissions of CAPs, GHG, and DPM from construction.

- MM 4.2-1 (j)** The Modified Project shall use Tier 4 Final off-road equipment for construction equipment 50 horsepower or greater, except for paving equipment.
- MM-4.2-1(j)** The Modified Project shall use electric construction equipment for equipment that is less than 50 horsepower

Mitigation Measure 4.2-2 Operational Emissions

Prior to issuance of occupancy permits, the Modified Project would reduce emissions of CAPs and GHGs during operation through the following actions:

- MM 4.2-2 (a)** Indoor painting shall utilize "super-compliant" VOC architectural coating for residential and non-residential interior areas. The VOC emission factors meet the more stringent limits in South Coast Air Quality Management District Rule 1113.
- MM 4.2-2 (b)** Exterior painting shall utilize "super-compliant" VOC architectural coating for residential and non-residential exterior areas. The VOC emission factors meet the more stringent limits in South Coast Air Quality Management District Rule 1113.
- MM 4.2-2 (c)** The Modified Project shall require energy-star rated appliances.
- MM 4.2-2 (d)** The Modified Project shall install electric water heaters and heaters in all residential and commercial development.
- MM 4.2-2 (e)** The Modified Project shall implement the Transportation Demand Management program described in **Section 4.13**.
- MM 4.2-2 (f)** The Modified Project will comply with the City's Zero Waste Ordinance resulting in a 50 percent diversion of solid waste from landfills.
- MM 4.2-2 (g)** The Modified Project shall install low-flow bathroom faucets, low-flow kitchen faucets, low-flow toilets, and low-flow showers, consistent with CALGreen requirements.
- MM 4.2-2 (h)** The Modified Project shall commit to exclusive use of small-sized (149-passenger, 2,900 horsepower) ferries or water taxis equipped with Tier 4 engines.

Mitigation Measure 4.2-3 Residential EV Chargers

Prior to the issuance of residential building permits, the Applicant or its designee shall submit building design plans to the City for review and approval that demonstrate that each new single-family residence within the Plan Area subject to application of Title 24, Part 6 of the CCR would be equipped with a minimum of one single-port EV charging station.

The EV charging stations shall achieve a similar or better functionality as a Level 2 charging station. In the event that the installed charging stations use functionality/technology other than Level 2 charging stations, the parameters of the mitigation obligation (i.e., the number of parking spaces served by EV charging stations) shall reflect the comparative equivalency of Level 2 charging stations to the installed charging stations on the basis of average charge rate per hour. For purposes of this equivalency demonstration, Level 2 charging stations shall be assumed to provide charging capabilities of 25 range miles per hour.

Mitigation Measure 4.2-4 Commercial EV Chargers

Prior to the issuance of commercial building permits, the Applicant or its designee shall submit building design plans to the City that demonstrate that the parking areas for commercial buildings in the Plan Area would be equipped with EV charging stations that provide charging opportunities to at least the number of

parking spaces required by CalGreen Tier 1 standards. “Commercial buildings” include retail, restaurant, light industrial, office, and mixed-use buildings.

The EV charging stations shall achieve a similar or better functionality as a Level 2 charging station. In the event that the installed charging stations use functionality/technology other than Level 2 charging stations, the parameters of the mitigation obligation (i.e., the number of parking spaces served by EV charging stations) shall reflect the comparative equivalency of Level 2 charging stations to the installed charging stations on the basis of average charge rate per hour. For purposes of this equivalency demonstration, Level 2 charging stations shall be assumed to provide charging capabilities of 25 range miles per hour.

Mitigation Measure 4.2-5 GHG Reduction Plan

Prior to issuance of occupancy permits, the Modified Project will reduce emissions of GHGs through implementation of a GHG Reduction Plan, which may include the following.

1. Purchase GHG emissions reduction credits from sources within the SFBAAB.
2. Increase on-site solar energy production beyond that required by the 2019 Title 24 Building Code.
3. Require commercial tenants to opt into a 100 percent carbon free electricity provider option, such as the Deep Green option provided by MCE.
4. Require use of electrically powered landscape equipment in the Modified Project.
5. Install electric vehicle chargers at multi-family residential buildings.
6. Install additional electric vehicle chargers in single-family residences.
7. Install additional electric vehicle chargers in commercial parking lots.
8. Provide additional residential and commercial bike parking (beyond City code requirements).
9. Provide bike sharing facilities for commercial and residential users.
10. Plant additional trees throughout the Project Site.
11. Install LED streetlights.
12. Reduce the Modified Project's use of natural gas.
13. Purchase carbon offsets from a CARB-approved registry.

Mitigation Measure 4.2-6 Potential VOCs in Disturbed Soil

The Modified Project would implement the SGWMP, described in **Section 4.7**, to reduce the potential for accidental release VOCs in the soil at the Project Site that may be disturbed by construction activities.

Mitigation Measure 4.2-7 Emergency Generator and WWTP Operations

The Modified Project shall comply with BAAQMD regulations 2-1 and 2-5 with implementation of new emergency generators and installation and operation of the WWTP. New sources of emissions must implement T-BACT if individual source risks exceed 1.0 in a million for cancer and/or the chronic HI is greater than 0.20. Additionally, a permit would be denied if Modified Project cancer risk exceeds 10.0 in a million or if chronic or if the acute HI exceeds 1.0.

Mitigation Measure 4.2-8 Odor

The following mitigation measures are proposed to reduce odor impacts from operation of the WWTP for the Modified Project. The following odor mitigation measures for WWTPs have been identified by the BAAQMD.

1. Activated Carbon Filter/Carbon Adsorption
2. Biofiltration/Bio Trickling Filters
3. Fine Bubble Aerator
4. Hooded Enclosures
5. Wet and Dry Scrubbers
6. Caustic and Hypochlorite Chemical Scrubbers
7. Ammonia Scrubber
8. Energy Efficient Blower System
9. Thermal Oxidizer
10. Capping/Covering Storage Basins and Anaerobic Ponds
11. Mixed Flow Exhaust
12. Wastewater Circulation Technology
13. Exhaust Stack and Vent Location with Respect to Receptors

4.2.6.2 Construction of the Bay Trail

This section includes mitigation measures that reduce environmental impacts of the development of the Bay Trail, a portion of which the Modified Project would construct in accordance with the approved mitigation measures. The following mitigation measures are incorporated by reference from the Bay Trail IS/MND, as described in **Section 1.4.4**. For ease of reference, the following mitigation measures are numbered the same as found in the Bay Trail IS/MND.

AQ-1

Consistent with the Basic Construction Mitigation Measures identified by the BAAQMD, the following actions shall be incorporated into construction contracts and specifications for the Modified Project.

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day with reclaimed water, if available.
- All haul trucks transporting soil, sand, or other loose material offsite shall be covered.
- All visible mud or dirt tracked-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day with reclaimed water, if available.
- All haul trucks transporting soil, sand, or other loose material offsite shall be covered.
- All visible mud or dirt tracked-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.

4.3 BIOLOGICAL RESOURCES

4.3.1 INTRODUCTION

This section provides a description of biological conditions on the Point Molate Site (Project Site) and describes the changes to those conditions that would result from implementation of the Point Molate Mixed-Use Development Project (Modified Project). Following an overview of the relevant regulatory setting in **Section 4.3.2** and the biological resources setting in **Section 4.3.3**, project-related impacts and identified mitigation measures are presented in **Section 4.3.5** and **Section 4.3.6**, respectively. The biological impacts identified with the Casino Project analyzed as Alternative A in the *Final Environmental Impact Report for the Point Molate Mixed-Use Tribal Destination Resort and Casino Project* (2011 FEIR) are also summarized in **Section 4.3.4** and the impacts from the Project Site are compared to the impacts of the Casino Project.

4.3.2 REGULATORY SETTING

4.3.2.1 Federal

Federal Endangered Species Act

Threatened or Endangered Species

The U.S. Fish & Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) implement the federal Endangered Species Act (ESA) of 1973 (16 U.S. Code [USC] § 1531 et seq.). Threatened and endangered animal species on the federal list (50 Code of Federal Regulations [CFR] Subsections 17.11, 17.12) are protected from “take” (direct or indirect harm) by individuals, unless incidental take is authorized under Sections 7 or 10 of the ESA. “Take” under the federal ESA includes modification of habitat that kills or injures threatened or endangered wildlife. Similarly, any federal action—including federal approvals—that involve adverse modification of habitat must proceed through the formal consultation process under Section 7. Critical habitat includes those specific geographic areas that contain features considered essential to the conservation of listed species and is designated as such by the USFWS. The USFWS also designates species of concern. While species of concern are not afforded legal protection under the ESA, the USFWS may still recommend specific management actions or publish guiding documents for these species.

Wetlands and Waters of the U.S.

Any project that involves discharge of dredged or fill material in navigable Waters of the U.S. must first obtain authorization from the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA). For any individual permit and some nationwide permits under Section 404, a Section 401 water quality certification from the Regional Water Quality Control Board (RWQCB) is also required. These two agencies also administer the National Pollution Discharge Elimination System general permits for construction activities disturbing one acre or more.

The term “Waters of the United States” is defined as (33 CFR § 328.3.):

1. waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including the territorial seas and waters which are subject to the

- flow of the tide;
2. tributaries of waters identified in 1;
 3. ditches that satisfy any of the conditions identified in 1; ditches constructed in a tributary or that relocate or alter a tributary as long as those ditches also satisfy the conditions of the tributary definition, and ditches constructed in an adjacent wetland as long as those ditches also satisfy the conditions of the tributary definition;
 4. lakes and ponds that satisfy any of the conditions identified in 1, lakes and ponds that contribute perennial or intermittent flow to a water identified in 1 in a typical year either directly or indirectly through other waters of the United States; and
 5. adjacent wetlands to waters identified in paragraphs 1 through 4 above.

The term “Wetlands” is defined under the CWA as (33 CFR § 328.3(c)(15).):

- areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands that meet these criteria during only a portion of the growing season are classified as seasonal wetlands.

Marine Mammal Protection Act

The Marine Mammal Protection Act prohibits the take of marine mammals within Waters of the U.S. or by U.S. citizens when on the high seas. For purposes of the Marine Mammal Protection Act, “take” means to harass, hunt, capture, or kill, or attempt to harass, hunt, capture, or kill a marine mammal (16 USC § 1362 (13.)). Take of a marine mammal protected under the Marine Mammal Protection Act is prohibited. Limited exceptions allow for the USFWS and NMFS to issue permits for the take of marine mammals.

Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act of 1976 is the primary law that regulates the management of marine fisheries within Waters of the U.S. Provisions included in this Act are designed to prevent overfishing and ensure continued fisheries stock.

Under the Magnuson-Stevens Act, Essential Fish Habitat (EFH) is defined as “those waters and substrates necessary to fish for spawning, breeding, feeding, or growth to maturity” (50 CFR 600.810). EFH is designated for those fish species with a federal fisheries management plan as determined by the Magnuson-Stevens Act and the NMFS. Projects that have the potential to adversely affect EFH must initiate consultation with NMFS. Adverse effects are “any direct or indirect effect that reduces the quality and/or quantity” of EFH. Adverse effects can include direct (e.g., contamination or physical disruption), indirect (e.g., loss of prey or reduction in species fecundity), site-specific, or habitat-wide impacts. Effects are considered adverse at the level of the individual, cumulative, or synergistic consequences of actions (50 CFR 600.810).

Rivers and Harbors Act

The Rivers and Harbors Act of 1899 (RHA) governs specified activities in navigable Waters of the U.S. Similar to the CWA, the RHA is also administered by USACE. Specifically, Section 9 requires

authorization from the Secretary of the Army, as delegated by the Chief of Engineers, for the construction of any structure in or over a navigable Waters of the U.S. This includes bridges, dams, dikes, or causeways over or in any ports, roadsteads, havens, harbors, canals, and navigable rivers. Construction of any structure in or over a navigable Water of the U.S. without proper authorization is considered unlawful. Within the context of Section 9, the U.S. Coast Guard is largely concerned with safe navigation in navigable waters. As such, the U.S. Coast Guard also reviews projects subject to Section 9 of the RHA with respect to navigation safety.

Section 10 of the RHA applies to any other activities that have the potential to affect the course, location, condition, or physical capacity of navigable Waters of the U.S. This includes the building or commencement of any wharf, pier, boom, weir, breakwater, bulkhead, jetty, or any other structure in any port, roadstead, haven, harbor, canal, navigable river, or other Water of the U.S. outside established harbor lines, or where no harbor lines have been established. Section 10 prohibits the excavation, fill, or any other alteration or modification to the course, location, condition, or capacity of, any port, roadstead, haven, harbor, canal, lake, harbor of refuge, or enclosure within the limits of any breakwater, or the channel of any navigable waters. Activities of this nature without USACE authorization are unlawful. As with Section 9 of the RHA, Section 10 also requires approval from the Chief of Engineers and authorization by the Secretary of the Army. The portions of the San Francisco Bay (Bay) within the Project Site are considered navigable Waters of the U.S.

Migratory Bird Treaty Act

Migratory birds are protected under the federal Migratory Bird Treaty Act of 1918 (MBTA; 16 USC §§ 703-712). The MBTA makes it unlawful to pursue, hunt, take, capture, kill, attempt to take, capture, kill, possess, buy, sell, purchase, or barter any migratory bird listed under 50 CFR § 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR § 21).

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act was enacted in 1940 to protect bald eagles and was later amended to include golden eagles (16 USC § 668-668c). It prohibits take, possession, and commerce of bald and golden eagles, parts, feathers, nests, or eggs, with limited exceptions. Under the Bald and Golden Eagle Protection Act, the definition of “take” includes to pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb. Bald eagles may not be taken unless a permit is issued prior to take. Activities that can be authorized by a permit include: scientific research, exhibition, tribal religious events, depredation, falconry, and the take of inactive golden eagle nests that interfere with resource development or recovery operations. The USFWS may also issue a permit for the take of bald or golden eagles where associated with, but not the purpose of, an otherwise lawful activity, and the take cannot practicably be avoided. (50 CFR §§ 22.26, 22.27)

4.3.2.2 State

California Endangered Species Act

The California Department of Fish and Wildlife (CDFW) implements State regulations pertaining to fish and wildlife and their habitat. The California Endangered Species Act (CESA) of 1984 (California Fish and

Game Code § 2050 et seq., and California Code of Regulations [CCR] Title 14, § 670.2, 670.51) prohibits the take (interpreted to mean the direct killing) of species listed under the CESA (California Fish and Game Code § 2080; 14 CCR §§ 670.2, 670.5).

Under the CESA, the CDFW is responsible for maintaining a list of threatened and endangered species designated under state law (California Fish and Game Code § 2070). In addition to the list of threatened and endangered species, CDFW maintains lists of species of special concern, which serve as “watch lists.” Pursuant to requirements of the CESA, an agency reviewing a project within its jurisdiction must determine whether any State-listed species may be present in the project area and determine whether the project would have a potentially significant impact upon such species.

Section 2081 allows CDFW to authorize take prohibited under Section 2080 provided that: (1) the taking is incidental to an otherwise lawful activity; (2) the taking will be minimized and fully mitigated; (3) the applicant ensures adequate funding for minimization and mitigation; and (4) the authorization will not jeopardize the continued existence of listed species (California Fish and Game Code § 2081).

Regional Water Quality Control Board

Wetlands and other waters of the State (which encompass waters of the U.S. as well as non-federal waters meeting the State definitions) are protected under Section 401 of the CWA and the Porter-Cologne Water Quality Control Act. The RWQCB administers and regulates discharges of fill and dredged material under these authorities, and may require either a 401 Water Quality Certification or issue Waste Discharge Requirements. The State Water Resources Control Board in 2019 adopted a State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State, which consist of: (1) a wetland definition; (2) a framework for determining if a feature that meets the wetland definition is a water of the State; (3) wetland delineation procedures; and (4) procedures for the submittal, review, and approval of applications for Water Quality Certifications and Waste Discharge Requirements for dredge or fill activities. The procedures also require certain projects to analyze alternatives to ensure that the selected project is the Least Environmentally Damaging Practicable Alternative, and imposes new mandates for monitoring and mitigation of project impacts. The Modified Project falls within the jurisdiction of the San Francisco Bay RWQCB (SFBRWQCB).

California Fish and Game Code

California Fish and Game Code §§ 2582, 3511, 4700, 5050, and 5515 include provisions prohibiting the take of any CDFW-listed Fully Protected Species. Prior to implementation of the ESA and CESA, the California Department of Fish and Game (now CDFW) maintained a list of those species believed to be rare or in peril of extinction, classified as “Fully Protected.” While most species currently identified by CDFW as Fully Protected are listed under the ESA and/or CESA, those species that are not formally listed, but are designated as Fully Protected, are still considered special-status species. Under California Fish and Game Code, “take” is defined as attempting to “hunt, pursue, catch, capture, or kill, or attempt” to perform such an action. Unlike under the federal ESA or CESA, the ability to secure a permit or other authorization to “take” a Fully Protected Species is severely limited. California Fish and Game Code § 3503 also includes provisions against the needless destruction of eggs and nests of any bird.

California Native Plant Protection Act

The California Native Plant Protection Act of 1977 (California Fish and Game Code § 1900 et seq.) requires the CDFW to establish criteria for determining if a species or variety of a native plant is endangered or rare. The California Native Plant Society (CNPS) maintains an extensive list of plant species that it considers to be rare, threatened, or endangered, but have no designated status or protection under federal or State endangered species legislation. The CNPS inventories the native flora of California and ranks species according to rarity; plants with California Rare Plant Rank (CRPR) 1A (plants presumed extirpated in California and either rare or extinct elsewhere), 1B (plants that are rare, threatened, or endangered in California and elsewhere), 2A (plants presumed extirpated in California but common elsewhere), and 2B (plants that are rare, threatened, or endangered in California but more common elsewhere) are considered special-status species requiring analysis under the California Environmental Quality Act (CEQA). There are two additional CRPR ranks: plants are ranked 3 if more information is needed (i.e., review list), and plants are ranked 4 if they are of limited distribution (i.e., watch list).

Pursuant to CEQA Guidelines § 15380, a species not formally listed under ESA or CESA may still be considered rare, threatened, or endangered if it meets the criteria in § 15380(b). CRPR List 1 and 2 plants as established under the California Native Plant Protection Act are afforded protection as special-status species for the purpose of CEQA analysis through the provisions of Title 14 of the CEQA Guidelines. While these plants do not require formal permits for take through the California Native Plant Protection Act, CRPR List 1 and 2 plants must be evaluated under CEQA, and local policies may require analysis of List 3 and List 4 plants. Local policies and ordinances may similarly guide allowable take levels and mitigation requirements for impacts to these species.

Lake or Streambed Alteration Agreement

Notice must be provided to CDFW for projects with the potential to result in the modification of a lake, river, or the bed, bank, or channel of a stream, including projects that involve extraction or deposition of fill material into a lake, river, or stream. Following notification of a project, CDFW determines if the project could substantially adversely affect fish or wildlife resources, any impacts on the initial riparian corridor along the streams such that the bank of a lake, river, or stream is significantly altered should be included. Based on a review of a project notification, CDFW may require the acquisition of a Lake or Streambed Alteration Agreement (LSAA).

State Lands Commission

The California State Lands Commission (SLC) holds authority over sovereign lands (i.e., public trust lands) in California, which includes all State lands under navigable waters, submerged lands, tidelands, immediately adjacent uplands, filled lands formerly under water, and school lands (Article 1, Public Resources Code [PRC] § 6102 et seq.). In general, uses of public trust lands are limited to water-related public trust uses, such as commerce, fisheries, navigation, environmental preservation, and recreation, as well as other types of uses that do not impair administration of the public trust. Public trust lands may also be retained in their natural state for the purposes of wildlife habitats and refuges, scientific pursuits, and open space. Public and private entities may apply to the SLC for leases and/or permits on public trust lands for several purposes including marinas, industrial wharves, dredging, sand mining, tanker

anchorage, grazing, right-of-ways, bank protection, recreational uses, etc. (Article 9, PRC §§ 6005, 6701, and 6702).

4.3.2.3 Local

San Francisco Bay Conservation and Development Commission

Within the Bay region, the Bay Conservation and Development Commission (BCDC) operates under jurisdiction granted by the Coastal Zone Management Act, McAteer-Petris Act, and Suisun Marsh Preservation Act. The BCDC regulates development along the Bay and is responsible for issuing permits for projects that could adversely impact natural resources of the Bay, especially those caused by the extraction or deposition of fill directly or indirectly into the Bay. BCDC's permitting jurisdiction is generally limited to 100 feet landward of and parallel to the shoreline. The BCDC's shoreline jurisdiction consists of the area between the Bay shoreline and a line 100 feet landward of and parallel to the shoreline. The shoreline is defined as all areas of the Bay "subject to tidal action from the south end of the (B)ay to the Golden Gate (Point Bonita-Point Lobos) and to the Sacramento River line (a line between Stake Point and Simmons Point, extended northeasterly to the mouth of Marshall Cut), including all sloughs, and specifically, the marshlands lying between mean high tide and five feet above mean sea level (amsl); tidelands (land lying between mean high tide and mean low tide); and submerged lands (land lying below mean low tide)."

San Francisco Bay Plan

The San Francisco Bay Plan (Bay Plan) is the BCDC's comprehensive planning document, which contains development objectives and policies for the Bay and shoreline within its jurisdiction under the McAteer-Petris Act (BCDC, 2019). The objectives of the Bay Plan are to protect the natural resources of the Bay and to develop the Bay and its shoreline to the highest potential while minimizing fill of the Bay. The Bay Plan designates certain shoreline areas within BCDC's jurisdiction as "Priority Use Areas." Such areas are to be reserved for water-oriented land uses, including ports, water-related industries, airports, wildlife refuges, water-oriented recreation and public assembly, desalinization plants, and power plants requiring large amounts of water for cooling purposes to minimize the need for future filling in the Bay for such uses.

Policies related to biological resources include provisions to protect habitats that support native or special-status species, to maintain biodiversity, and to provide appropriate mitigation for those impacts resulting from development projects. The San Pablo Peninsula, represented in Plan Map 4 of the Bay Plan, is primarily proposed for waterfront park use with an emphasis on the protection of existing eelgrass beds. A summary of the consistency of the Modified Project with the Bay Plan is included as **Appendix O**. The following policies are related to biological resources.

Section III **Fish, Other Aquatic Organisms and Wildlife Policy 1.** To assure the benefits of fish, other aquatic organisms and wildlife for future generations, to the greatest extent feasible, the Bay's tidal marshes, tidal flats, and subtidal habitat should be conserved, restored, and increased.

- Section III** **Fish, Other Aquatic Organisms and Wildlife Policy 2.** Specific habitats that are needed to conserve, increase, or prevent the extinction of any native species, species threatened or endangered, species that the California Department of Fish and Game (now CDFW) has determined are candidates for listing as endangered or threatened under the California Endangered Species Act [CESA], or any species that provides substantial public benefits, should be protected, whether in the Bay or behind dikes.
- Section III** **Fish, Other Aquatic Organisms and Wildlife Policy 3.** In reviewing or approving habitat restoration programs the Commission [BCDC] should be guided by the recommendations in the Baylands Ecosystem Habitat Goals report and should, where appropriate, provide for a diversity of habitats to enhance opportunities for a variety of associated native aquatic and terrestrial plant and animal species.
- Section III** **Fish, Other Aquatic Organisms and Wildlife Policy 4.** The Commission [BCDC] should: (1) Consult with the California Department of Fish and Game and the U.S. Fish and Wildlife Service [USFWS] or the National Marine Fisheries Service [NMFS] whenever a proposed project may adversely affect an endangered or threatened plant, fish, other aquatic organism or wildlife species; (2) Not authorize projects that would result in the "taking" of any plant, fish, other aquatic organism or wildlife species listed as endangered or threatened pursuant to the State or federal endangered species acts, or the federal Marine Mammal Protection Act, or species that are candidates for listing under the California Endangered Species Act [CESA], unless the project applicant has obtained the appropriate "take" authorization from the U.S. Fish and Wildlife Service [USFWS], National Marine Fisheries Service [NMFS] or the California Department of Fish and Game; and (3) Give appropriate consideration to the recommendations of the California Department of Fish and Game, the National Marine Fisheries Service [NMFS], or the U.S. Fish and Wildlife Service (USFWS) in order to avoid possible adverse effects of a proposed project on fish, other aquatic organisms and wildlife habitat.
- Section III** **Tidal Marshes and Tidal Flats Policy 3.** Projects should be sited and designed to avoid, or if avoidance is infeasible, minimize adverse impacts on any transition zone present between tidal and upland habitats. Where a transition zone does not exist and it is feasible and ecologically appropriate, shoreline projects should be designed to provide a transition zone between tidal and upland habitats.
- Section VI** **Public Access Policy 3.** Public access to some natural areas should be provided to permit study and enjoyment of these areas. However, some wildlife are sensitive to human intrusion. For this reason, projects in such areas should be carefully evaluated in consultation with appropriate agencies to determine the appropriate location and type of access to be provided.
- Section VI** **Public Access Policy 4.** Public access should be sited, designed, and managed to prevent significant adverse effects on wildlife. To the extent necessary to understand

the potential effects of public access on wildlife, information on the species and habitats of a proposed project site should be provided, and the likely human use of the access area analyzed. In determining the potential for significant adverse effects (such as impacts on endangered species, impacts on breeding and foraging areas, or fragmentation of wildlife corridors), site-specific information provided by the project applicant, the best available scientific evidence, and expert advice should be used. In addition, the determination of significant adverse effects may also be considered within a regional context. Siting, design, and management strategies should be employed to avoid or minimize adverse effects on wildlife, informed by the advisory principles in the Public Access Design Guidelines. If significant adverse effects cannot be avoided or reduced to a level below significance through siting, design and management strategies, then in lieu public access should be provided, consistent with the project and providing public access benefits equivalent to those that would have been achieved from on-site access. Where appropriate, effects of public access on wildlife should be monitored over time to determine whether revisions of management strategies are needed.

Section VI **Public Access Policy 13.** The Public Access Design Guidelines should be used as a guide to siting and designing public access consistent with a proposed project. The Design Review Board should advise the Commission [BCDC] regarding the adequacy of the public access proposed.

Section VI **Public Access Policy 14.** Public access should be integrated early in the planning and design of Bay habitat restoration projects to maximize public access opportunities and to avoid significant adverse effects on wildlife.

City of Richmond General Plan Element 7, Conservation and Natural Resources

Element 7 of the City of Richmond (City) General Plan 2030 (General Plan) covers conservation, natural resources, and open space (City of Richmond, 2012). This element identifies several policies for the use, protection, and management of natural resources within the City including the preservation of biodiversity and sensitive biological resources, the promotion of propagation of native plants and removal of invasive plants, and the restoration of urban creeks. Additional emphasis is given to the protection of open space/conservation areas and concentrating development below 400 feet in elevation. These provisions are to be balanced with other goals such as recreational access to natural areas. The policies discussed below represent those that are most relevant to the Modified Project and the biological resources on the Project Site. A summary of the consistency of the Modified Project with the General Plan is included as **Appendix L**.

Conservation, Natural Resources, and Open Space Policy 1.1

The City Council and Planning Commission should:

1. protect natural habitat and work with CDFW, San Francisco Bay Regional Water Quality Control Board [SFBRWQCB], the East Bay Regional Park District [EBRPD] and other regional agencies

to identify areas for special protection and establish appropriate protection measures for these areas;

2. protect resources to maximize the efficacy of natural systems and encourage sustainable development practices and conservation measures to ensure a healthy natural environment;
3. protect wetlands from direct and indirect impacts of new and existing development and infrastructure; ensure that direct and indirect impacts to wetland habitats are minimized by environmentally sensitive project siting and design;
4. protect marshlands and Baylands to ensure they are not polluted or damaged from bay filling and dredging;
5. protect and restore creek corridors and riparian areas to ensure they function as healthy wildlife habitat and biological areas;
6. protect and restore creek corridors and riparian areas by restoring riparian habitat with appropriate vegetation and channel design; removing culverts and hardened channels where appropriate; improving creek access; avoiding future culverting or channelization of creeks; and ensuring appropriate and ongoing maintenance;
7. at a minimum, require mitigation of impacts to sensitive species ensuring that a project does not contribute to the decline of the affected species populations in the region; identify mitigations in coordination with the USFWS, CDFW, and other regulatory agencies;
8. not authorize projects that would result in the "taking" of any plant, fish, other aquatic organism or wildlife species listed as endangered or threatened pursuant to the state or federal endangered species acts, or the federal Marine Mammal Protection Act, or species that are candidates for listing under the CESA, unless the project Applicant has obtained the appropriate "take" authorization from the USFWS, NMFS, or the California Department of Fish and Game; and
9. give appropriate consideration to the recommendations of the California Department of Fish and Game (now CDFW), the NMFS, or the USFWS in order to avoid possible adverse effects of a proposed project on fish, other aquatic organisms, and wildlife habitat.

Conservation, Natural Resources, and Open Space Policy 1.2

Promote the use of locally propagated native plant and tree species and remove and control the spread of invasive exotic plant species. Promote and protect native plant species in natural areas as well as in public landscaping of parks, schools, medians, and planter strips. Work closely with landowners, landscapers, and nurseries to remove and prevent the spread of invasive exotic plant species.

Conservation, Natural Resources, and Open Space Policy 1.3

Encourage the restoration of urban creeks and coordinate with property owners and local interest groups in the restoration efforts. Daylighting of creeks that are currently in culverts or hardened channels shall be pursued where feasible in new and redevelopment projects.

Conservation, Natural Resources, and Open Space Policy 2.1

Preserve open space areas along the shoreline, creeks, and in the hills to protect natural habitat and maintain the integrity of hillsides, creeks, and wetlands. Protect existing open space, agricultural lands, and parks.

Conservation, Natural Resources, and Open Space Policy 2.2

Minimize the impacts of development on the shoreline with special attention to intensity, density, and proximity to the water. Conserve, protect, and enhance natural and cultural resources along the Richmond [City] shoreline. Promote a balance of uses along the shoreline that supports multiple community needs such as economic development, recreation, historic preservation, and natural resource protection.

Protect and restore wetlands, native habitats and open space; develop shoreline parks and trails to increase public access; encourage recreation and tourism activities; and enhance and showcase historic and cultural resources. Prepare, adopt, and implement plans that will protect natural and built environments from adverse potential impacts of sea level rise due to climate change.

Protect and restore wetlands, native habitats and open space; develop shoreline parks and trails to increase public access; encourage recreation and tourism activities; and enhance and showcase historic and cultural resources. Prepare, adopt, and implement plans that will protect natural and built environments from adverse potential impacts of sea level rise due to climate change.

Conservation, Natural Resources, and Open Space Policy 2.5

Improve access to large-scale natural areas located in the City including regional parks along the shoreline and in the hills. These areas should be open for controlled access to improve public enjoyment and interpretation. Access should be limited where natural habitat is extremely sensitive. Work with transit agencies to improve connections and access to open space and recreation facilities from all neighborhoods in the City.

Conservation, Natural Resources, and Open Space Policy 2.6

Minimize soil depletion and erosion. Prevent erosion caused by construction activities. Retain natural vegetation and topography and minimize grading of hillsides.

Conservation, Natural Resources, and Open Space Policy 6.2

Protect and expand tree resources within the City. Protect native trees, heritage trees, and oak woodlands; expand and maintain street tree planning; use zoning and building requirements to ensure that trees are included in new developments; and engage the community to undertake planting campaigns. Furthermore, promote trees as economic and environmental resources for the use, education, and enjoyment of current and future generations.

City of Richmond 1997 Point Molate Reuse Plan

The 1997 *Point Molate Reuse Plan* (Reuse Plan) was developed to define guiding goals and principles following the City's acquisition of the Point Molate property. The Reuse Plan lists goals and objectives for redeveloping the Project Site, including goals and objectives related to environmental compatibility. These include: minimize impacts of future development on natural environment; limit new development to areas previously developed; preserve hillsides from further development; ensure adequate and safe cleanup of contaminated land and groundwater; protect natural resources; identify rare, threatened, and endangered species and ensure protection of them and their habitat; preserve visual access to the Bay and other

features; provide a variety of open space for outdoor recreation; and control exotic vegetation and restore native plants. The Reuse Plan's goals and objectives are broad and allow for compromise and balancing when determining project consistency.

Baylands Ecosystem Habitat Goals

The Baylands Ecosystem Habitat Goals is a report of habitat recommendations created under the San Francisco Bay Area Wetlands Ecosystem Goals Project. While not a legally binding document, the Baylands Ecosystem Habitat Goals report has provided guiding information for other regulatory framework, including the City General Plan. Habitat goals of this report include:

- promotion of a diverse mosaic of biological communities and habitat types;
- re-establishment of historical continuity of habitat;
- restoration of sensitive habitat; and
- management of different land use types and transitions with public and private landowners for social, economic, and ecological benefit.

San Francisco Bay Subtidal Habitat Goals Project

The San Francisco Bay Subtidal Habitat Goals Project is a collaborative document guiding regional planning in the San Francisco Bay Area (Bay Area) with an emphasis on understanding, protecting, and restoring aquatic habitats of the Bay. This effort is in collaboration with NMFS, BCDC, the Coastal Conservancy, the California Ocean Protection Council, and the San Francisco Estuary Partnership. While not a legally binding effort, the findings and recommendations resulting from this project inform planning and regional regulations that dictate the use and management of biological resources in the region. Many of the goals and recommendations are also consistent with regulations surrounding development in the Bay and relate to the Modified Project specifically in relation to protection of eelgrass bed habitat.

City of Richmond Urban Greening Master Plan

The City of Richmond Urban Greening Master Plan is a guiding development and planning document that identifies goals and policies for future development and maintenance of City land. These goals include: protect the urban forest; expand the urban forest through greening initiatives; manage and support the urban forest and urban greening; educate and promote stewardship of the urban forest; and fund the urban forest and urban greening initiatives. An inventory of trees owned by the City at the time of the development of the Plan included the trees in the Point Molate area (Zone 12 of the Plan). Those land areas held in control by the City would be subject to the goals and policies of the Urban Greening Master Plan. Those land areas held privately are suggested to work with the City in achieving the goals through the Plan.

Richmond Tree Removal Permit

The City provides protection from removal or damage to trees on City property. Removal or damage to trees on City property would require acquisition of a permit from the City's Recreation and Parks Director, or an authorized deputy (Richmond Municipal Code [RMC] Chapter 10.08.010 through 10.08.030).

City of Richmond Bird Safe Building Code

The City of Richmond Bird Safe Building Code (§ 15.04.608.030) requires new development to adhere to certain window glazing and lighting restrictions based on the type and size of new structures in order to prevent avian injury and mortality from birds striking windows or glass. This code defines “bird collisions zones” as the following.

1. Glass facades beginning at grade and extending upwards for 60 feet
2. Glass facades directly adjacent to landscaped roofs two acres or larger in area and extending upwards 60 feet from the level of the roof

Glass in these categories must be properly glazed to reduce the likelihood of avian injury or mortality. Uplighting is additionally prohibited within bird collision zones. Rehabilitation of historic buildings is generally exempted from these requirements. Uplighting and glazing requirements within bird collision zones apply to the following structures in addition to those listed above.

- New buildings with a floor area of 10,000 square feet or more that are two stories or more in height and located within or adjacent to open spaces two acres and larger in size that are dominated by open water or vegetation, including vegetated landscaping, forest, meadows, grassland, and wetlands
- Free-standing glass walls over 15 feet in height and 30 feet in length
- Glass wind barriers
- Skywalks
- Certain large greenhouses

4.3.3 ENVIRONMENTAL SETTING

This section describes the environmental setting of the Project Site based on preliminary research data and on-site field surveys as described below. A description and analysis of habitat types and special-status species is also included herein. An account of former and existing land uses on the Project Site is included in **Section 3.2.2**, which describes existing development and historical and ongoing disturbance on the Project Site.

4.3.3.1 Methods

Biological site surveys were completed for certification of the 2011 FEIR. Since then, additional biological site surveys were completed during 2015 and 2016 and again on March 28–29, 2019, and July 9–10, 2019 for the Modified Project. Site visits consisted of pedestrian-level surveys; data locations were collected using a Global Positioning System technology Trimble® GeoXT® receiver. Prior to conducting site visits, the following resources were reviewed.

- A list of USFWS-classified special-status species with the potential to occur within the Project Site (list last updated on August 28, 2019) (USFWS, 2019a; USFWS, 2019b; **Appendix P**)
- A California Natural Diversity Database list of special-status species with the potential to occur within the “San Quentin” and “Richmond” 7.5-minute topographic quads (list last updated on August 28, 2019) (CDFW, 2019; **Appendix P**)

- A CNPS list of special-status plant species with the potential to occur within the “San Quentin” and “Richmond” 7.5-minute topographic quads (list last updated on August 28, 2019) (CNPS, 2019; **Appendix P**)
- A USFWS Critical Habitat Map for threatened and endangered species (USFWS, 2019c; **Appendix P**)
- An NMFS EFH Map of species management units within the Project Site (NMFS, 2019a; **Appendix P**)
- An NMFS Western Coast Region California Species List for the “San Quentin” 7.5-minute topographic quad (list last updated on August 29, 2019) (NMFS, 2019b; **Appendix P**)
- A U.S. Department of Agriculture Natural Resources Conservation Service (NRCS) Custom Soil Resource Report (NRCS, 2019; **Appendix P**)
- A USFWS National Wetlands Inventory map of wetland features (USFWS, 2019d; **Appendix P**)

In addition to those resources listed above, the following reports were generated based on those surveys described above. Reports were reviewed prior to following site visits.

- 2011 FEIR
- The 2007 Delineation of Potential Jurisdictional Water of the United States (Vollmar Consulting, 2007; Appendix L of the 2011 FEIR) approved May 15, 2009 (USACE, 2009)
- Biological Assessment of the Point Molate Mixed-Use Tribal Destination Resort and Casino (Appendix J of the 2011 FEIR)
- Supplemental Habitat Analysis for Point Molate Mixed-Use Tribal Destination Resort and Casino (**Appendix P**)
- Point Molate Marine Biological Resources and Impact Assessment for the Winehaven Legacy LLC Development Project (**Appendix P**)

Species observed on the site were identified to the lowest taxonomical level possible. Plants were identified during the appropriate period of identification and followed *The Jepson Manual: Vascular Plants of California* (Hickman, 1993), and *The Jepson Manual: Vascular Plants of California, Second Edition* (Baldwin et al., 2012).

4.3.3.2 Habitat Types

Habitat types were assessed in the 2011 FEIR and preceding studies utilizing the methods of classification presented in *A Manual of California Vegetation* (Sawyer and Keeler-Wolf, 1995), *Preliminary Descriptions of the Terrestrial Communities of California* (Holland, 1986), and *A Guide to Wildlife Habitats of California* (Mayer and Laudenslayer, 1988). These methods were used to accurately evaluate changes in impacts of the Modified Project to those described in the 2011 FEIR. Additionally, Natural Communities described by CDFW (CDFW, 2018a), and *A Manual of California Vegetation: Second Edition* (Sawyer et al., 2009) were also considered in order to determine if current vegetation community mapping methods revealed impacts that were not addressed in the 2011 FEIR. All vegetation classification methods have been modified to reflect existing conditions on the Project Site.

Habitats existing on the Project Site are presented consistent with those methods used in the 2011 FEIR for the sake of comparison and analysis. An updated habitat map is included as **Figure 4.3-1**. Terrestrial

habitat types observed onsite during surveys included: ruderal/ developed, annual grassland, coastal scrub, invasive scrub, mixed riparian, eucalyptus woodland, and beach strand. Aquatic habitat types included: navigable waters, eelgrass bed, seasonal wetland, ephemeral drainage, and tidal marsh. A summary of habitat types is included in **Table 4.3-1**. Habitat types are discussed in further detail below.

TABLE 4.3-1
SUMMARY OF HABITAT TYPES WITHIN THE PROJECT SITE

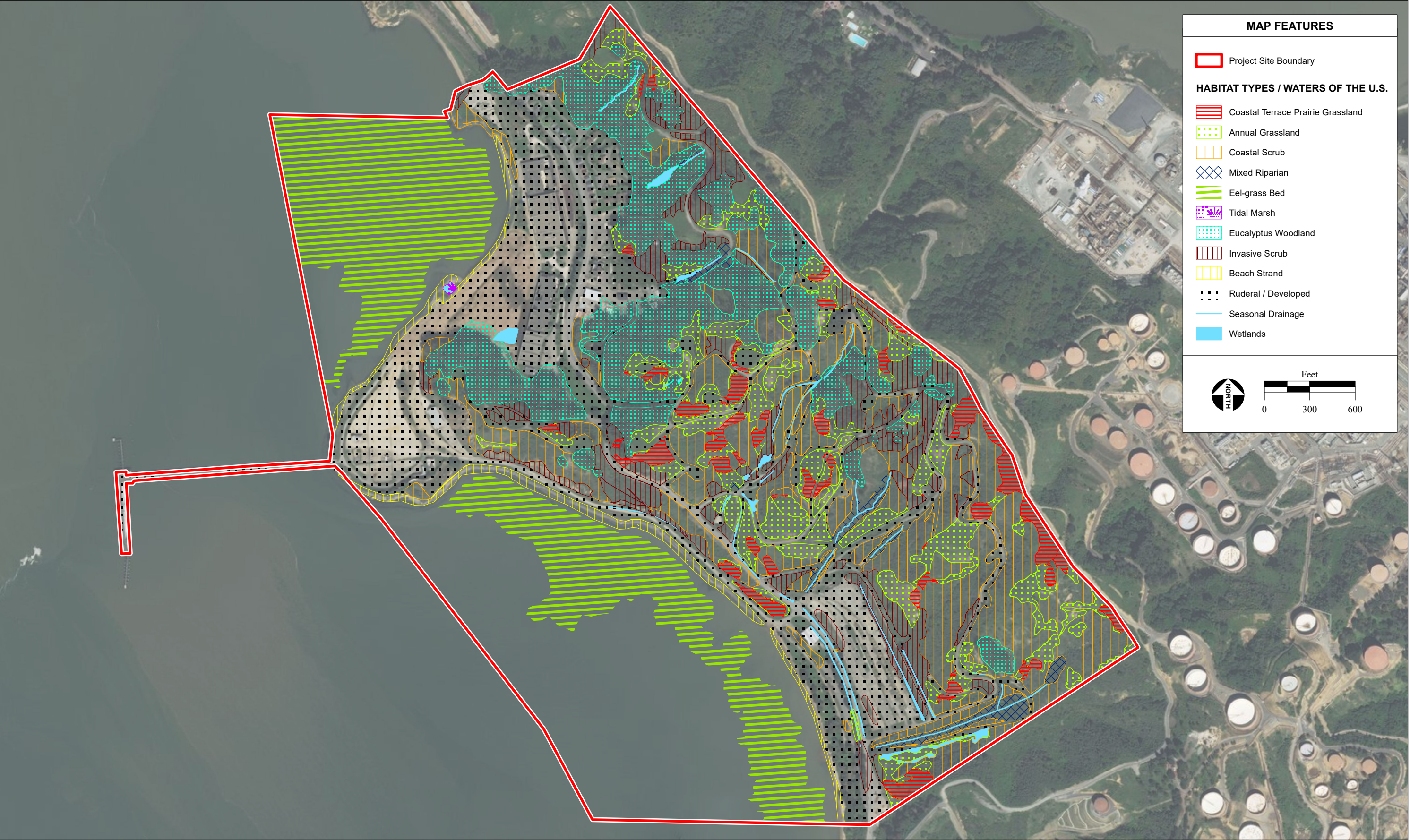
Habitat Type	Acres
Terrestrial	
Ruderal/Developed	94.1
Annual Grassland	27.3
Coastal Terrace Prairie	10.7
Coastal Scrub	58.2
Invasive Scrub	25.7
Mixed Riparian	3.8
Eucalyptus Woodland	44.3
Beach Strand	6.5
Aquatic	
Navigable Waters	134.7
Eelgrass Bed*	50.0
Seasonal Wetland	2.8
Ephemeral Drainage	1.2 (4,533 linear feet)
Tidal Marsh	0.11
Note: *A subset of Navigable Waters Source: 2019 Biological Field Surveys, Appendix P .	

Ruderal/Developed

The areas classified as ruderal/developed habitat within the Project Site include all existing buildings and structures, pumps and stations, roads and parking areas, aboveground pipes, cement-lined catch basins, landscaped areas, and otherwise disturbed or disrupted regions. Areas on the site where underground storage tanks have been buried are classified as ruderal/disturbed habitat because these regions have been manipulated and flattened, have sparsely distributed non-native vegetation, and are frequently mowed. Approximately 94.1 acres or 23.0 percent of the Project Site constitutes ruderal/developed habitat.

Annual Grassland

Annual grassland habitat is scattered throughout the Project Site and encompasses approximately 27.3 acres or 6.6 percent of the Project Site. Trees and shrubs are largely absent within this community, and non-native annual grasses and forbs dominate.



SOURCE: DigitalGlobe Aerial Photograph, 8/31/2017; Wetlands and Water Resources, Inc., 2007; AES, 1/21/2020

Figure 4.3-1
Habitat Map

Coastal Terrace Prairie

While the majority of grasslands on the Project Site are dominated by non-native species, native coastal grasses were observed interspersed with non-native grasses. A Supplemental Habitat Analyses report was prepared to address habitat types of concern or importance on the Project Site (**Appendix P**). This report included surveys of grassland habitats for those grassland areas on the Project Site with the highest levels of native grass percent cover. Figure 1 of **Appendix P** shows those areas that were determined to have a significant cover of native grasses, which were determined to be best described as coastal terrace prairie. Therefore, coastal terrace prairie has been included as its own habitat type within the tables, figures, and analysis presented herein. This habitat type makes up 10.7 acres or 2.6 percent of the Project Site. The Supplemental Habitat Assessment additionally identified those areas best suited for preservation and use in restoration activities. In general, four isolated areas of native coastal grasses were identified where native coastal grasses were present in significant cover either within non-native grassland or as the understory within coastal scrub habitat. One larger and continuous location of native coastal grasses was observed along the southern portion of the ridgeline bordering the Chevron® property.

Coastal Scrub

Coastal scrub habitat is scattered throughout the Project Site, though it is most concentrated within the southeastern portion. This habitat type encompasses approximately 58.2 acres or 14.2 percent of the Project Site. Trees are largely absent within this community, though a few isolated coast live oak (*Quercus agrifolia*) and Sargent cypress (*Cupressus sargentii*) were observed at higher elevations. Shrub species are the dominant strata within this habitat type.

Invasive Scrub

Invasive scrub habitat is scattered throughout the Project Site and occurs in high concentrations along the existing roadways. Invasive scrub habitat also occurs in and around many of the ruderal/developed areas onsite. This habitat type encompasses approximately 25.7 acres or 6.3 percent of the Project Site. Most of the plant species that compose this community are non-native species that thrive on disturbance.

Mixed Riparian

The mixed riparian habitat that occurs onsite is within small regions around existing wetland features and is found surrounding channelized, man-made, and natural drainages. This vegetation community is a dense corridor with a highly variable species composition. This habitat type accounts for approximately 3.8 acres or 0.9 percent of the Project Site.

Eucalyptus Woodland

Eucalyptus are a non-native tree dominant in dense woodland across the Project Site. The majority occur in the northern regions of the Project Site, east of the ruderal/developed areas associated with the Naval Fuel Depot. A few smaller stands occur in the southeastern regions of the Project Site. Blue gum (*Eucalyptus globulus*) is the dominant species within this community. Few other plant species can occur in this habitat due to the dense canopies of the stands and because eucalyptus trees secrete allelopathic chemicals that inhibit the growth of other plant species. However, poison oak

(*Toxicodendron* Mill.), toyon (*Heteromeles arbutifolia*), Himalayan blackberry (*Rubus armeniacus* Focke), Pacific sanicle (*Sanicula crassicaulis*), and honeysuckle (*Lonicera* spp.) are sparsely distributed in the peripheries of the thick eucalyptus stands. This habitat type accounts for approximately 44.3 acres or 10.8 percent of the Project Site.

Beach Strand

Beach strand habitat exists at the intergrade zone where the aquatic and terrestrial habitats of the Bay interchange. This habitat type is predominantly non-vegetated and consists of sand with areas of riprap placed for fortification. Beach strand encompasses approximately 6.5 acres or 1.6 percent of the Project Site. Patches of coastal and non-native vegetation are scattered within the boulders and in a small number of areas on the sand.

Eelgrass Bed

Eelgrass (*Zostera marina* and *Z. pacifica*) are submerged aquatic species adapted and highly specialized to life in the marine environment. These species forms a complex and highly productive underwater landscape, of which they are the dominant vegetation. Eelgrass reproduces by seed and rhizomatous growth, growing rapidly during the spring and summer months and beginning to decay during the fall and winter. Dead eelgrass blades wash up onto the shore frequently where their decay contributes essential nutrients to coastal environments. This unique habitat type is highly dynamic and supports a large diversity of fin and shellfish species, plankton, and invertebrates. Fish such as Pacific herring (*Clupea pallasii*), juvenile salmon (*Oncorhynchus* spp.), and ling cod (*Ophiodon elongatus*) use this habitat type as a fundamental food source and refuge. Eelgrass is also an important food source for waterbirds. Algae and invertebrate species such as amphipods, snails, crabs, and shrimp use eelgrass as substrate and food source. In addition, eelgrass beds protect coastal areas from shoreline erosion and destruction.

Eelgrass in the Bay serves as not only an important role in the food web, but additionally as a moderator of ocean pH and carbon sink. Point Molate supports one of the most stable eelgrass beds in the Bay and has served as an important source of eelgrass for restoration projects in other areas. While the species of eelgrass found within the Project Site are not special-status species under CEQA as defined in **Section 4.3.3.4**, eelgrass beds are considered a sensitive habitat type by the NMFS.

Approximately 50.0 acres or 12.2 percent of the Project Site is composed of eelgrass bed, which is included as a component of the navigable waters (**Figure 4.3-1**). This habitat type occurs just off the shore, in the western region of the Project Site. The eelgrass present to the south of the pier is primarily within the 600 feet immediately off the shoreline. Eelgrass to the north of the pier extends further out into the Bay as far as the edge of the Project Site boundary. A 2019 biological survey and report targeting eelgrass bed habitat was completed for the Modified Project and is included as **Appendix P**. Eelgrass beds are a subset of Navigable Waters habitat.

Navigable Waters

The west-central portion of the Project Site and the pier extend into the Bay. The Bay is hydrologically connected to and essentially part of the Pacific Ocean. This portion of the Project Site is subject to the periodic ebb and flow of the ocean tide and is used during interstate and/or foreign commerce.

Approximately 134.7 acres of navigable waters were mapped within the Project Site, including approximately 50.0 acres of eelgrass bed. These open waters are present off the shoreline and surround the existing ferry landing/pier.

Seasonal Wetland

Seasonal wetlands, which are varied and include man-made or channelized features, are interspersed throughout the Project Site. Naturally occurring seasonal wetlands varying from ephemerally wet depressions to marsh-like habitat also occur on the Project Site. Approximately 2.8 acres of seasonal wetlands were mapped within the Project Site.

A USACE jurisdictional delineation of Wetlands and Waters of the U.S., approved in March of 2009 (Appendix L of the 2011 FEIR), identified 2,758 acres of jurisdictional wetlands under the CWA. This delineation expired in March of 2014. A re-delineation of aquatic features on the Project Site was completed during the 2019 biological surveys for the Modified Project (Analytical Environmental Services [AES], 2019; 2019 Re-Delineation; **Appendix P**), which determined that four small seasonal wetlands totaling 0.32 acres described in the 2009 USACE verification may no longer be present on the Project Site, and ephemeral drainages are excluded under the new federal rule defining wetlands. However, this re-delineation has not been verified by USACE, and those areas may still be identified as Waters of the State. Therefore, in an abundance of caution, the 0.32 acres of seasonal wetland potentially absent from the Project Site are included in **Figure 4.3-1** and **Figure 4.3-2**, as well as within the impacts analysis in **Section 4.3.5**.

Ephemeral Drainage

The ephemeral drainages are linear water features that exhibit an ordinary high water mark. As seasonal features that typically convey rainwater and surface runoff flows during the rainy season and for short periods of time, ephemeral drainages are not typically influenced by groundwater. The ephemeral drainages within the Project Site are linear features; several are man-made and have been culverted. The ephemeral drainages found onsite are largely non-vegetated within the actual channels, though riparian vegetation is present in some adjacent upland areas.

A USACE jurisdictional delineation of Wetlands and Waters of the U.S., approved in March of 2009 (Appendix L of the 2011 FEIR), determined that USACE had jurisdiction over 4,925 linear feet of ephemeral drainage. This jurisdictional delineation expired in March of 2014. Therefore, a re-delineation was completed during the 2019 biological surveys for the Modified Project (AES, 2019; **Appendix P**). The 2019 Re-delineation determined that two ephemeral drainages totaling 0.028 acres (382 linear feet) described in the 2009 USACE verification may no longer exist on the Project Site. However, this re-delineation has not been verified by USACE. Therefore, the 0.028 acres of ephemeral drainage potentially absent from the Project Site have been included in **Figure 4.3-1** and **Figure 4.3-2** as well as within the impacts analysis in **Section 4.3.5**.

Tidal Marsh

A small region of tidal marsh, approximately 0.11 acre or 0.03 percent of the Project Site, is located in the western region near the shore. This habitat type is highly productive, hosts a diversity of highly specialized plant and animal species, and is subject to regular tidal inundation by the Bay.

The 2019 Re-delineation of aquatic features on the Project Site completed during the 2019 biological surveys for the Modified Project (AES, 2019; **Appendix P**) determined that tidal marsh habitat was present as described in the 2009 USACE verification.

4.3.3.3 Wetlands and Waters of the U.S.

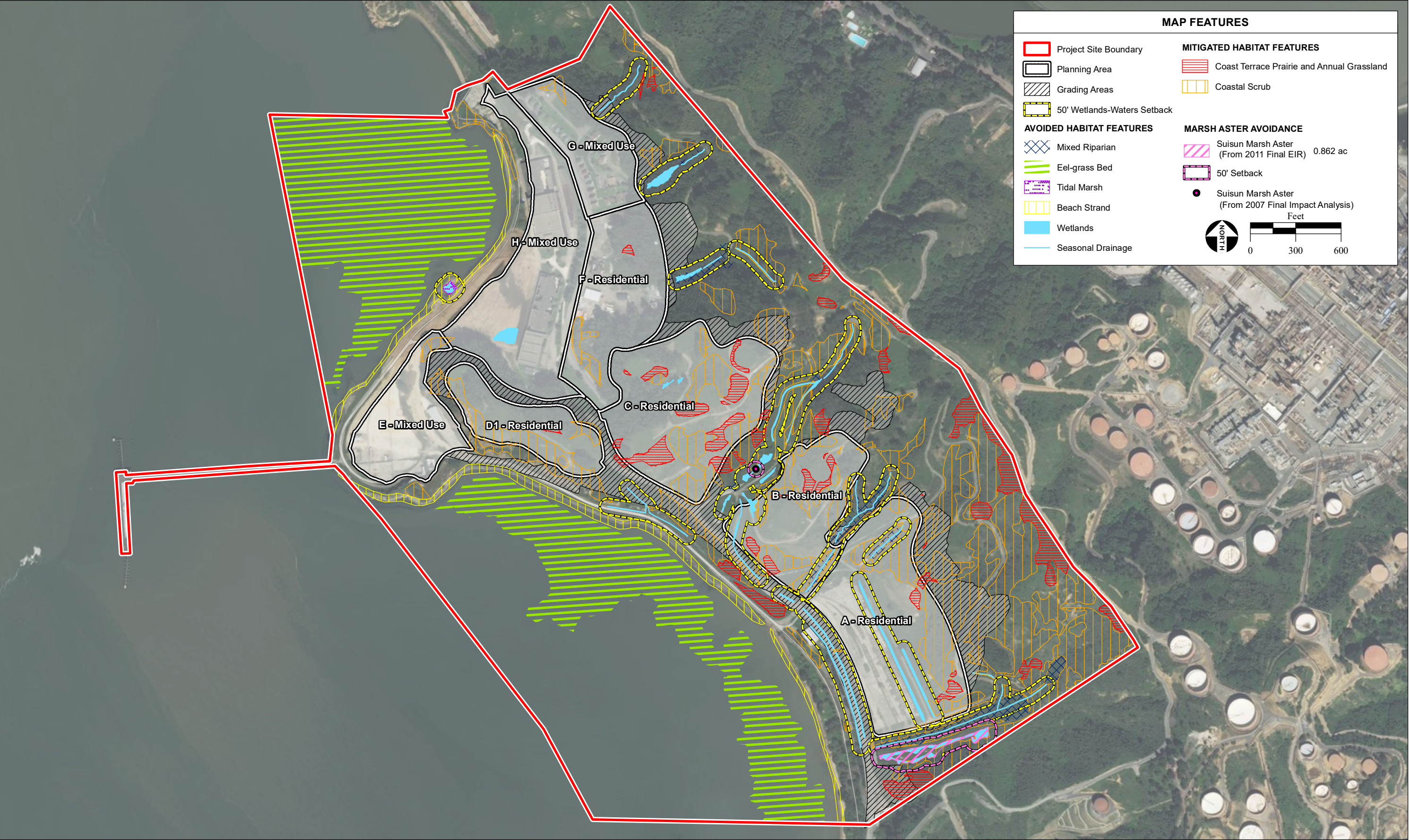
Navigable water, seasonal wetland, ephemeral drainage, and tidal marsh habitat described above have the potential to be jurisdictional Wetlands or Waters of the U.S. or Waters of the State. A jurisdictional wetland delineation verified by USACE in March of 2009 identified 144.123 acres of traditionally navigable waters, 2.758 acres of wetlands, 4,925 linear feet of drainages, and 0.378 acres of other waters. A re-delineation was performed for those identified Wetlands and Waters of the U.S. as they relate to the Modified Project. The majority of features were present as described, with the exception of four small wetlands and 382 linear feet of drainage which were no longer present on the Project Site. Aquatic features absent in the current delineation are no longer considered Wetlands or Waters of the U.S. The current delineation would require USACE to verify that the features that were observed in 2009 are no longer present onsite. The features that were previously described may still be considered Wetlands or Waters of the U.S. and would also require USACE verification.

4.3.3.4 Special-Status Species

For the purposes of this assessment, special-status is defined as species that are of management concern to state and/or federal resource agencies, and includes those species that are:

- listed as endangered, threatened, or candidate under the ESA;
- listed as endangered, threatened, rare, or proposed under the CESA;
- designated as endangered, rare, fully protected, or a species of special concern pursuant to California Fish and Game Code; or
- a plant or animal that meets the definitions of rare, threatened, or endangered under CEQA, including plants listed by the CNPS as “rare, threatened, or endangered in California” (Lists 1A, 1B, and 2).

The City has not adopted any policies regarding potential locally rare or otherwise regionally protected species that would require additional analysis beyond those species meeting at least one of the above criteria. A table describing regionally occurring special-status species along with their potential to occur on the Project Site is included as **Table 4.3-2**. An asterisk following a county indicates that the species may no longer occur in those counties and therefore represents historical information only.



SOURCE: DigitalGlobe Aerial Photograph, 8/31/2017; Wetlands and Water Resources, Inc., 2007; AES, 1/30/2020

Figure 4.3-2
Sensitive Biological Resources

TABLE 4.3-2
REGIONALLY OCCURRING SPECIAL-STATUS SPECIES

Scientific Name Common Name	Federal/State/ CNPS List	Distribution	Habitat Requirements	Period of Identification	Potential to Occur Onsite
PLANTS					
<i>Amorpha californica</i> var. <i>napensis</i> Napa false indigo	--/--/1B.2	Known to occur in Lake, Monterey, Marin, Napa, and Sonoma counties	Found in broad-leaved upland forest (openings), chaparral, and cismontane woodland habitats; elevations range from 0-2,000 meters	April-July	No. Suitable habitat for this species is not present on the Project Site.
<i>Amsinckia lunaris</i> Bent-flowered fiddleneck	--/--/1B.2	Known to occur in Alameda, Contra Costa, Colusa, Lake, Marin, Napa, San Benito, Santa Clara, Santa Cruz, San Mateo, Sonoma, Sutter, and Yolo counties	Annual herb that grows on gravelly slopes or serpentine; found in coastal bluff scrub, openings in cismontane woodland, valley, and foothill grassland; elevations range from 3-800 meters	March-June	No. Occurrence of this species within the Project Site is unlikely; serpentine soils and graveled slopes do not occur onsite.
<i>Arctostaphylos pallida</i> Pallid manzanita	FT/CE/1B.1	Known to occur in Alameda and Contra Costa counties	Broad-leaved upland forest, closed-cone coniferous forest, chaparral, cismontane woodland, and coastal scrub/siliceous shale, sandy or gravelly; elevations range from 185-465 meters	December-March	Yes. Coastal scrub present on the Project Site represents suitable habitat for this species.
<i>Astragalus tener</i> var. <i>tener</i> Alkali milk-vetch	--/--/1B.2	Known to occur in Alameda, Contra Costa, Merced, Monterey, Napa, San Benito, Santa Clara, San Francisco, San Joaquin, Solano, Sonoma, Stanislaus, and Yolo counties; however, it is presumed extirpated in Contra Costa, Monterey, San Benito, Santa Clara, San Francisco, San Joaquin, Sonoma, and Stanislaus counties	Found on thin clay or alkaline soils and in playas; grows in valley and foothill grassland and vernal pools; elevations range from 1-200 meters	March-June	Yes. The annual grassland on the Project Site may be suitable habitat for this species, though the Project Site lacks vernal pools and alkaline soils.

Scientific Name Common Name	Federal/State/ CNPS List	Distribution	Habitat Requirements	Period of Identification	Potential to Occur Onsite
<i>Calochortus tiburonensis</i> Tiburon mariposa lily	FT/CT/1B.1	Known to occur only in Marin County	Valley and foothill grassland (serpentine); elevations range from 50-150 meters	March-June	No. Occurrence of this species within the Project Site is unlikely; serpentine soils do not occur onsite. (The nearest documented occurrence is approximately 4 miles southwest across the Bay.)
<i>Calystegia purpurata</i> ssp. <i>Saxicola</i> Coastal bluff morning-glory	--/--/1B.2	Known to occur in Lake, Mendocino, Contra Costa, Marin and Sonoma counties	Occurs in coastal dunes, coastal scrub, and north coast coniferous forest; elevations range from 10-105 meters	May-September	Yes. The coastal scrub onsite is suitable habitat for this species.
<i>Castilleja affinis</i> ssp. <i>Neglecta</i> Tiburon paintbrush	FE/CT/1B.2	Known to occur in Marin, Napa, and Santa Clara counties	Valley and foothill grassland (serpentine); elevations range from 60-400 meters	April-June	No. Occurrence of this species within the Project Site is unlikely; the nearest documented occurrence is located approximately 4 miles southwest of the Project Site across the Bay. This species is a localized endemic and has not been documented within Contra Costa County.
<i>Chloropyron maritimum</i> ssp. <i>palustre</i> Point Reyes salty birds-beak	--/--/1B.2	Known to occur in Alameda, Humboldt, Marin, Santa Clara, San Francisco, San Mateo, and Sonoma counties	An annual herb (hemiparasitic) found in marshes and swamps (coastal salty); elevations range from 0-10 meters	June-Oct	Yes. The tidal marsh and seasonal wetlands onsite are suitable habitat for this species.
<i>Cordylanthus molle</i> ssp. <i>molle</i> Soft bird's beak	FE/CR/1B.2	Known to occur in Contra Costa, Marin*, Napa, Sacramento*, Solano, and Sonoma* counties	Marshes and swamps (coastal salt); elevations range from 0-3 meters	July-November	Yes. The tidal marsh and seasonal wetlands onsite are suitable habitat for this species.

Scientific Name Common Name	Federal/State/ CNPS List	Distribution	Habitat Requirements	Period of Identification	Potential to Occur Onsite
<i>Cirsium andrewsii</i> Franciscan thistle	--/--/1B	Known to occur in Contra Costa, Marin, San Francisco, San Mateo, and Sonoma counties	Broadleaf upland forest, coastal bluff scrub, coastal prairie, coastal scrub/mesic, sometimes serpentine; elevations range from 0-150 meters	March-July	No. This species was not returned during an updated database search. The nearest known occurrence is over 8 miles away and is separated from the Project Site by the City, coastal mountains, and the San Pablo Reservoir.
<i>Dirca occidentalis</i> Western leatherwood	--/--/1B.2	Known to occur in Alameda, Contra Costa, Marin, Santa Clara, San Mateo, and Sonoma counties	Broadleaf upland forest, closed-cone coniferous forest, chaparral, cismontane woodland, north coast coniferous forest, riparian forest, and riparian woodland/mesic; elevations range from 25-425 meters	January-April	Yes. The mixed riparian habitat onsite is suitable habitat for this species.
<i>Eriogonum luteolum</i> var. <i>caninum</i> Tiburon buckwheat	--/--/1B.2	Known to occur in Alameda, Contra Costa, Marin, and Sonoma counties	Serpentine, sandy to gravelly soils; chaparral, cismontane woodland, coastal prairie, and valley and foothill grassland; elevations range from 0-700 meters	May-September	No. Occurrence of this species within the Project Site is unlikely; serpentine soils do not occur onsite.
<i>Fritillaria liliacea</i> Fragrant fritillary	--/--/1B.2	Known to occur in Alameda, Contra Costa, Monterey, Marin, San Benito, Santa Clara, San Francisco, San Mateo, Solano, and Sonoma counties	Perennial bulbiferous herb occurs growing on heavy or serpentine soils within open hills, fields near coast, coastal prairie, coastal scrub, valley and foothill grassland, and cismontane woodland; elevations range from 3-410 meters	February-April	Yes. The coastal scrub and annual grassland habitat onsite is suitable habitat for this species.

Scientific Name Common Name	Federal/State/ CNPS List	Distribution	Habitat Requirements	Period of Identification	Potential to Occur Onsite
<i>Helianthella castanea</i> Diablo helianthella	--/--/1B.2	Known to occur in Alameda, Contra Costa, Marin, San Francisco, and San Mateo counties	Broadleaf upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, and valley and foothill grassland; elevations range from 60-1,300 meters	March-June	Yes. The coastal scrub, mixed riparian, and annual grassland habitats onsite are suitable for this species.
<i>Hesperolinon congestum</i> Marin western flax	FT/CT/1B.1	Known to occur in Marin, San Francisco, and San Mateo counties	Chaparral and valley and foothill grassland/serpentine; elevations range from 5-370 meters	April-July	No. Occurrence of this species onsite is unlikely, although there are several documented occurrences of this species within 5 miles southwest of the Project Site, across the Bay. This species has not been documented in Contra Costa County and serpentine soils do not occur onsite.
<i>Hoita strobilina</i> Loma Prieta hoita	--/--/1B.1	Known to occur in Alameda, Contra Costa, Santa Clara, and Santa Cruz counties	A gland-dotted perennial herb in the legume family (fabaceae). It occurs in chaparral, cismontane woodland, and riparian woodland (usually serpentine and mesic regions) habitats; elevations range from 30-860 meters	May-July (August, September, October)	Yes. The riparian woodland habitat onsite is suitable habitat for this species.

Scientific Name Common Name	Federal/State/ CNPS List	Distribution	Habitat Requirements	Period of Identification	Potential to Occur Onsite
<i>Holocarpha macradenia</i> Santa Cruz tarplant	FT/CE/1B.1	Known range of Santa Cruz tarplant includes Alameda, Contra Costa, Monterey, Marin, and Santa Cruz counties	An annual, strongly aromatic herb from the composite family (Asteraceae). It occurs in coastal prairie, coastal scrub, and valley and foothill grassland (often clay, sandy) habitats; elevations range from 10-220 meters	June-October	Yes. The coastal scrub and annual grassland onsite are suitable habitats for this species.
<i>Meconella oregano</i> White fairypoppy	--/--/1B.1	Known to occur in Contra Costa, Monterey, Santa Clara, and San Luis Obispo counties	An annual herb found in coastal prairies and coastal scrub; elevations range from 250-620 meters	March-April	Yes. The coastal scrub and annual grassland onsite are suitable habitats for this species.
<i>Pentachaeta bellidiflora</i> White-rayed pentachaeta	FE/CE/1B.1	Known to occur in Marin, Santa Cruz, and San Mateo counties	An annual herb found in cismontane woodland and valley and foothill grassland (often serpentine); elevation ranges from 35-620 meters	March-May	No. Occurrence of this species within the Project Site is unlikely; serpentine soils do not occur onsite. The nearest documented occurrence of this species is located approximately 4 miles west of the Project Site across the Bay. This species has not been documented within Contra Costa County.
<i>Plagiobothrys glaber</i> Hairless popcornflower	--/--/1A	Known to occur in Alameda, Marin, San Benito, and Santa Clara counties	An annual herb found in meadows and seeps (alkaline), and marshes and swamps (coastal salt); elevations range from 15-180 meters	March-May	No. Occurrence of this species within the Project Site is unlikely; nearest known occurrence is more than 5 miles southwest of the Project Site across the Bay.

Scientific Name Common Name	Federal/State/ CNPS List	Distribution	Habitat Requirements	Period of Identification	Potential to Occur Onsite
<i>Spergularia macrotheca</i> <i>var. longistyla</i> Long-styled sand-spurrey	--/--/1B.2	Known to occur in Alameda, Contra Costa, Napa, and Solano counties	Found in alkaline habitats, including meadows, seeps, marshes, and swamps; elevations range from 0-255 meters	February-May	Yes. The on-site tidal marsh may provide suitable habitat for this species.
<i>Streptanthus albidus</i> <i>peramoenus</i> Most beautiful jewelflower	--/--/1B.2	Known to occur in Alameda, Contra Costa, Monterey, Santa Clara, and San Luis Obispo counties	An annual herb found in chaparral, cismontane woodland, and valley and foothill grasslands; elevations range from 95-1,000 meters	March-October	Yes. The annual grassland habitat onsite is suitable habitat for this species. Probability of occurrence is low due to lack of preferred serpentine soils.
<i>Streptanthus</i> <i>glandulosus ssp. Niger</i> Tiburon jewelflower	FE/CE/1B.1	Known to occur only in Marin County	Valley and foothill grassland (serpentine); elevations range from 30-150 meters	May-July	No. Occurrence of this species within the Project Site is unlikely; serpentine soils do not occur onsite. The two nearest documented occurrences are less than 5 miles southwest of the Project Site across the Bay. This species has not been documented within Contra Costa County.
<i>Suaeda californica</i> California seablite	FE/--/1B.1	Known to occur in Alameda, Contra Costa, Santa Clara, San Francisco, and San Luis Obispo counties	A perennial evergreen shrub that is found in marshes and swamps (coastal salty); elevations range from 0-15 meters	July-October	Yes. The tidal marsh is suitable habitat for this species.

Scientific Name Common Name	Federal/State/ CNPS List	Distribution	Habitat Requirements	Period of Identification	Potential to Occur Onsite
<i>Symphotrichum lentum</i> Suisun Marsh aster	--/--/1B.2	Known to occur in Contra Costa, Napa, Sacramento, San Joaquin, Solano, and Yolo counties	Found in marshes and swamps (brackish and freshwater); elevations range from 0-3 meters	May-November	Yes. Several of the seasonal wetland features within the Project Site are suitable habitat for this species. This species has been documented onsite.
<i>Trifolium amoenum</i> Two-fork clover	FE/--/1B.1	Known to occur in Alameda*, Marin, Napa*, Santa Clara*, San Mateo, Solano*, and Sonoma* counties	Annual herb found on moist, heavy soils, serpentine, and occasionally in disturbed areas and often in coastal bluff scrub, valley and foothill grasslands; elevations range from 5-415 meters	April-June	No. Although the annual grassland onsite is suitable habitat for this species, it is not likely to occur as the nearest documented occurrence is located approximately 4 miles southwest of the Project Site across the Bay. This species has not been documented within Contra Costa County.
<i>Trifolium hydrophilum</i> Saline clover	--/--/1B.2	Known to occur in Alameda, Contra Costa, Colusa, Lake, Monterey, Napa, Sacramento, San Benito, Santa Clara, Santa Cruz, San Joaquin, San Luis Obispo, San Mateo, Solano, Sonoma, and Yolo counties. However, this species is unconfirmed in Colusa County.	Annual herb found in marshes, swamps, and valley and foothill grassland that are occasionally on mesic, alkaline soils, and in vernal pools; elevations range from 0-300 meters	April-June	Yes. Suitable habitat for this species is present onsite, though the Project Site lacks vernal pools and alkaline soils.
<i>Triquetrella californica</i> Coastal triquetrella	--/--/1B.2	Known to occur in Contra Costa, Del Norte, Mendocino, Marin, San Diego, San Francisco, San Mateo, and Sonoma counties	A moss found in soil in coastal bluff scrub and coastal scrub; elevations ranges from 10-100 meters	N/A	No. Occurrence of this species on the Project Site is unlikely as the nearest documented occurrence is located approximately 4 miles southwest of the Project Site across the Bay.

Scientific Name Common Name	Federal/State/ CNPS List	Distribution	Habitat Requirements	Period of Identification	Potential to Occur Onsite
Animals					
Invertebrates					
<i>Callophrys mossii bayensis</i> San Bruno elfin butterfly	FE/--/--	Found in coastal mountains near the Bay in the fog-belt of steep north facing slopes that receive little direct sunlight. All known locations are restricted to San Mateo County, where several populations are known from San Bruno Mountain, Milagra Ridge, the San Francisco Peninsula Watershed, and Montara Mountain.	The San Bruno Elfin Butterfly inhabits rocky outcrops and cliffs in coastal scrub on the San Francisco Peninsula. Its host plant, stonecrop (<i>Sedum spathulifolium</i>) occurs between 274-328 meters although it also has been known to eat Montara Mountain manzanita (<i>Arctostaphylos montaraensis</i>) and huckleberry (<i>Vaccinium ovatum</i>). Adult food plants have not been fully determined.	Adults emerge in early spring (February and March). Dormant in loose top soil from June until February of the following year.	No. Project Site does not contain suitable host plants or forage for this species.
Fish					
<i>Acipenser medirostris</i> Green sturgeon - Southern Distinct Population Segment (DPS)	FT/CSC/--	The green sturgeon ranges from Mexico to at least Alaska in marine waters, and is observed in bays and estuaries up and down the west coast of North America. Green sturgeon are believed to spawn in the Rogue River, Klamath River Basin, and the Sacramento River with rare occurrences in the Umpqua River. Green sturgeon appear to occasionally occupy the Eel River, and may also be using the Trinity River although there is question surrounding this location.	Green sturgeon are believed to spend the majority of their lives in nearshore oceanic waters, bays, and estuaries. Younger green sturgeon reside in fresh water, with adults returning to freshwater to spawn. Adults live in oceanic waters, bays, and estuaries when not spawning.	Consult Agency	Yes. The portion of the Project Site that includes open waters of the Bay is suitable habitat for this species.

Scientific Name Common Name	Federal/State/ CNPS List	Distribution	Habitat Requirements	Period of Identification	Potential to Occur Onsite
<i>Archoplites interruptus</i> Sacramento perch	--/CSC/--	Exist in Clear Lake and Alameda Creek/Calaveras Reservoir, as well as in some farm ponds and reservoirs. Sacramento perch have been introduced through the State including the upper Klamath basin, upper Pit River watershed, Walker River watershed, Mono Lake watershed, and Owens River watershed, and may exist in Sonoma Reservoir in the Russian River watershed.	Sacramento perch occupy sloughs, lakes, and slow moving rivers. Sacramento perch are often found in clear water among beds of aquatic vegetation, achieving greater numbers in turbid lakes absent of plants. Sacramento perch are typically found along the bottom of inshore regions.	Consult Agency	No. Suitable habitat for this species is not present on the Project Site.
<i>Eucyclogobius newberryi</i> Tidewater goby	FE/CSC/--	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County to the mouth of the Smith River	Found in shallow lagoons and lower stream reaches; tidewater goby need fairly still but not stagnant water and high oxygen levels	Consult Agency	No. Suitable habitat for this species is not present on the Project Site.
<i>Hypomesus transpacificus</i> Delta smelt	FT/CE/--	Occurs almost exclusively in the Sacramento-San Joaquin estuary, from the Suisun Bay upstream through the Sacramento-San Joaquin Delta (Delta) in Contra Costa, Sacramento, San Joaquin, Solano, and Yolo counties; may also occur in the Bay	Found in estuarine waters; majority of life span is spent within the freshwater outskirts of the mixing zone (saltwater-freshwater interface) within the Delta	Consult Agency	No. Suitable habitat for this species is not present on the Project Site.
<i>Oncorhynchus kisutch</i> pop. 4 Coho salmon (Central California Coast Evolutionary Significant Unit [ESU])	FE/CE/--	This ESU is known to occur throughout the major rivers and tributaries from the Noyo River, south of Fort Bragg, to the San Lorenzo River, east of Santa Cruz. The distribution includes Marin, Mendocino, San Francisco, San Mateo, Santa Cruz, and Sonoma counties.	Spawning occurs in streams with pool and riffle complexes. For successful breeding, cold water and gravelly streambeds are required.	November – February	Yes. The portion of the Project Site that includes open waters of the Bay is suitable habitat for this species.

Scientific Name Common Name	Federal/State/ CNPS List	Distribution	Habitat Requirements	Period of Identification	Potential to Occur Onsite
<i>Oncorhynchus mykiss irideus</i> pop. 8 Steelhead (Central California Coast DPS)	FT/--/--	Central California Coastal ESU, spawns in drainages from the Russian River basin, Sonoma and Mendocino counties, to Soquel Creek, Santa Cruz County (including the San Francisco Bay basin, but not the Sacramento and San Joaquin rivers or their tributaries)	Found in cool, clear, fast-flowing permanent streams and rivers with riffles and ample cover from riparian vegetation or overhanging banks. Spawning occurs in streams with pool and riffle complexes. For successful breeding, cold water and gravelly streambeds are required.	Consult Agency	Yes. The portion of the Project Site that includes open waters of the Bay is suitable habitat for this species.
<i>Oncorhynchus mykiss irideus</i> pop. 11 Steelhead (Central Valley DPS)	FT/--/--	Spawn in the Sacramento and San Joaquin rivers and tributaries before migrating to the Delta and Bay Area	Found in cool, clear, fast-flowing permanent streams and rivers with riffles and ample cover from riparian vegetation or overhanging banks. Spawning occurs in streams with pool and riffle complexes. For successful breeding, cold water and gravelly streambeds are required.	Consult Agency	Yes. The portion of the Project Site that includes open waters of the Bay is suitable habitat for this species.
<i>Oncorhynchus tshawytscha</i> pop. 6 Chinook salmon (Central Valley Spring Run ESU)	FT/CT/--	The Central Valley spring-run Chinook Salmon ESU includes all naturally spawned populations of spring-run Chinook salmon in the Sacramento River and its tributaries in California, including Churn Creek.	Found in cool, clear, fast-flowing permanent streams and rivers with riffles and ample cover from riparian vegetation or overhanging banks. Spawning occurs in streams with pool and riffle complexes. For successful breeding, cold water and gravelly streambeds are required.	Consult Agency	Yes. The portion of the Project Site that includes open waters of the Bay is suitable habitat for this species.

Scientific Name Common Name	Federal/State/ CNPS List	Distribution	Habitat Requirements	Period of Identification	Potential to Occur Onsite
<i>Oncorhynchus tshawytscha</i> pop. 7 Chinook salmon (Sacramento River Winter Run ESU)	FE/CE/--	The Sacramento River Winter Run ESU includes winter-run Chinook salmon spawning naturally in the Sacramento River and its tributaries, as well as winter-run Chinook salmon that are part of the conservation hatchery program at the Livingston Stone National Fish Hatchery.	Found in cool, clear, fast-flowing permanent streams and rivers with riffles and ample cover from riparian vegetation or overhanging banks. Spawning occurs in streams with pool and riffle complexes. For successful breeding, cold water and gravelly streambeds are required.	Consult Agency	Yes. The portion of the Project Site that includes open waters of the Bay is suitable habitat for this species.
<i>Spirinchus thaleichthys</i> Longfin smelt, Bay (Delta DPS)	FC/CT; CSC/--	Habitat range in California occurs slightly upstream from Rio Vista (on the Sacramento River in the Delta) including the Cache Slough region and Medford Island (on the San Joaquin River in the Delta) through Suisun Bay and Suisun Marsh, San Pablo Bay, San Francisco Bay (main), South San Francisco Bay, the Gulf of the Farallones, just outside of the Golden Gate, Humboldt Bay, Eel river estuary, and local coastal areas	Occurs in benthic habitat within medium and large low-grade river systems. Also found in open waters of estuaries, mostly in middle or bottom of water column. Prefer salinities of 15-30 parts per trillion, but can be found in complete freshwater to almost pure seawater.	Consult Agency	No. Suitable habitat for this species is not present on the Project Site.
<i>Thaleichthys pacificus</i> Pacific eulachon (southern DPS)	FT/--/--	Occurs in the Bay Region north to the Bearing Sea in marine waters, coastal estuaries, and inland rivers	Spawning occurs between the years of 2-5 in late winter to early summer in cool waters that have a variety of sand, cobble, or bedrock substrate. Spawning typically occurs in waters influenced by tides.	All Year	No. Suitable habitat for this species is not present on the Project Site.

Scientific Name Common Name	Federal/State/ CNPS List	Distribution	Habitat Requirements	Period of Identification	Potential to Occur Onsite
Amphibians					
<i>Rana draytonii</i> California red-legged frog	FT/CSC/--	Known to occur along the Coast from Mendocino County to Baja California, and inland through the northern Sacramento Valley into the foothills of the Sierra Nevada mountains, south to eastern Tulare County, and possibly eastern Kern County. Currently accepted range excludes the Central Valley	Occurs in permanent and temporary pools of streams, marshes, and ponds with dense grassy and/or shrubby vegetation; elevations range from 0-1,160 meters.	November-March (breeding) June-August (non-breeding)	No. Aquatic habitat on the Project Site is not sufficient for the requirements of this species. Nearest occurrence is over 7 miles away across the City and over the San Pablo Ridge.
Reptiles					
<i>Chelonia mydas</i> Green sea turtle	FT/--/--	Globally distributed and generally found in tropical and subtropical waters along continental coasts and islands between 30° North and 30° South. In the eastern North Pacific, occurs from Baja California to southern Alaska. Has been observed off the coast near San Francisco	Nests on oceanic beaches, feeds in benthic grounds in coastal areas, and frequents convergence zones in the open ocean.	Consult Agency	Yes. The navigable open waters and eelgrass beds are suitable habitat for this species exists.
<i>Emys marmorata</i> Western pond turtle	--/CSC/--	Distribution ranges from Washington to northern Baja California	Inhabit rivers, streams, lakes, ponds, reservoirs, stock ponds, and permanent wetland habitats with basking sites.	All Year	No. Suitable habitat for this species exists on the Project Site.

Scientific Name Common Name	Federal/State/ CNPS List	Distribution	Habitat Requirements	Period of Identification	Potential to Occur Onsite
<i>Masticophis lateralis euryxanthus</i> Alameda whipsnake	FT/CT/--	Inhabits the inner coast range, including Alameda, Contra Costa, San Joaquin, and Santa Clara counties	Typically found in chaparral, northern coastal sage scrub, and coastal sage scrub communities. May also occur in adjacent habitats including annual grassland, oak savannah, and oak-bay woodland; requires rock outcrops for retreat and access to prey species; elevations range from 0-153 meters.	May - August	No. The Project Site lacks suitable retreat habitat. The nearest occurrence of this species is over 7 miles from the Project Site.
Birds					
<i>Accipiter cooperii</i> Cooper's hawk	--/WL/--	Known to occur from Siskiyou Co. south to San Diego County; also scattered nesting in interior valleys and woodlands of Coast Range from Humboldt County south, and in the western foothills of the Sierra Nevada range	Deciduous, mixed, and evergreen forests, and deciduous stands of riparian habitat; elevations range from sea level to above 2,700 meters	All Year	Yes. The riparian habitat within the Project Site is suitable for this species.
<i>Asio flammeus</i> Short-eared owl	--/CSC/--	Known to breed sparsely in northeast (Klamath Basin, Modoc Plateau, Great Basin) south to Lassen County; Uncommon and irregular breeder in S. Sacramento Valley, around the Bay, and south in interior and coastal valleys to Monterey County. Some concentration in Solano County, just north and east of San Francisco. Scarce, local, and possibly extirpated as a breeder in southern California	Usually found in open areas with few trees, such as annual and perennial grasslands, prairies, dunes, meadows, irrigated lands, and saline and fresh emergent wetlands; nests usually located on dry sites with enough vegetation to conceal incubating female.	All Year	Yes. The annual grassland and wetlands within the Project Site are suitable habitats for this species.

Scientific Name Common Name	Federal/State/ CNPS List	Distribution	Habitat Requirements	Period of Identification	Potential to Occur Onsite
<i>Athene cunicularia</i> Burrowing owl	--/CSC/--	Formerly common within the described habitats throughout California except the northwest coastal forests and high mountains	Yearlong resident of open, dry grassland and desert habitats, as well as in grass, forb, and open shrub stages of pinyon-juniper and ponderosa pine habitats	All Year	No. Suitable habitat for this species is not present on the Project Site.
<i>Charadrius alexandrinus nivosus</i> Western snowy plover	FT/CSC/--	The Pacific coast breeding population of the western snowy plover currently extends from Damon Point, Washington, to Bahia Magdalena, Baja California, Mexico. The snowy plover winters mainly in coastal areas from southern Washington to Central America.	Snowy plovers (Pacific coast population) breed primarily above the high tide line on coastal beaches, sand spits, dune-backed beaches, sparsely vegetated dunes, beaches at creek and river mouths, and salt pans at lagoons and estuaries. In winter, snowy plovers are found on many of the beaches used for nesting as well as on beaches where they do not nest, in man-made salt ponds, and on estuarine sand and mud flats.	All Year	Yes. Suitable habitat for this species exists on the Project Site.
<i>Circus cyaneus</i> Northern harrier	--/CSC/--	Permanent residents of the northeastern plateau and coastal areas; less common resident of the Central Valley	Coastal scrub, Great Basin grassland, marsh and swamp (coastal and fresh water), riparian scrubs, valley and foothill grassland, and wetlands; nests on the ground, usually in tall, dense clumps of vegetation, either alone or in loose colonies; occurs from annual grassland up to lodgepole pine and alpine meadow habitats, in elevations as high as 3,000 meters.	All Year	Yes. Suitable habitat for this species exists on the Project Site.

Scientific Name Common Name	Federal/State/ CNPS List	Distribution	Habitat Requirements	Period of Identification	Potential to Occur Onsite
<i>Elanus leucurus</i> White-tailed kite	--/FP/--	Permanent resident of coastal and Valley lowlands	Habitats include savanna, open woodland, marshes and swamps, partially cleared lands and cultivated fields, mostly in lowland habitats; open groves, river valleys, marshes, grasslands; nesting occurs in trees; found in a wide variety of open habitats in North America, including open oak grassland, desert grassland, farm country, and marshes; main requirements seem to be trees for perching and nesting, and open ground with high populations of rodents	All Year	Yes. Suitable habitat for this species for all life stages, including foraging and nesting, exists on the Project Site.
<i>Geothlypis trichas sinuosa</i> Salt-marsh common yellowthroat	--/CSC/--	Breeding range bounded by the Tomales Bay on the north, Carquinez Strait on the east, and Santa Cruz County to the south, with occurrences in the Bay Area during migration and winter	Salt, brackish, and freshwater marshes; nests just above ground or over water, in thick herbaceous vegetation, often at the base of shrubs or saplings, sometimes higher in weeds or shrubs up to about 1 meter in height	March-July	Yes. The tidal marsh, wetland, mixed riparian, invasive scrub, and beach strand habitat is suitable habitat for this species.
<i>Haliaeetus leucocephalus</i> Bald eagle	FD/CE, FP/--	Breeding territories are in northern California, but the eagles also nest in scattered locations in the central and southern Sierra Nevada mountains and foothills, in several locations from the central coast range to inland southern California, and on several California islands. Winters throughout most of California.	Found in mountain and foothill forests and woodlands near ocean shorelines, lakes, reservoirs, river systems, and coastal wetlands; most usually lives within 2 kilometers of waters that offers foraging opportunities; suitable foraging habitat consists of large bodies of water or rivers with abundant fish and adjacent perching sites such as snags or large trees	All Year	Yes. Although suitable nesting habitat is not readily available for this species on the Project Site, the open water and foraging habitat are suitable for this species.

Scientific Name Common Name	Federal/State/ CNPS List	Distribution	Habitat Requirements	Period of Identification	Potential to Occur Onsite
<i>Laterallus jamaicensis coturniculus</i> California black rail	--/CT, FP/--	In coastal California during breeding season, presently found at Bodega Bay, Tomales Bay, Bolinas Lagoon, the San Francisco Bay estuary, and Morro Bay; overwhelming majority of birds in the northern portion of the San Pablo Bay at relatively few sites; occurs irregularly south to Baja California; small quantities exist in the Salton Trough and on the lower Colorado River from Bill Williams River (historically) to Laguna Dam	Nests in high portions of salt marshes, shallow freshwater marshes, wet meadows, and flooded grassy vegetation; uses sites with shallower water than other North American rails; most breeding areas vegetated by fine-stemmed emergent plants, rushes, grasses, or sedges; sites used in coastal California characterized by taller vegetation, with greater coverage and height of alkali heath (<i>Frankenia grandifolia</i>)	All Year	Yes. The tidal marsh and wetlands within the Project Site are suitable habitats for this species.
<i>Melospiza melodia pusillula</i> Alameda song sparrow	--/CSC/--	Known to occur in areas bordering southern and eastern fringes of the Bay	Commonly found in saltmarsh, brackish marsh, and fringe areas, where marsh vegetation is limited to edges of dikes, landfills, or other margins of high ground bordering salt or brackish water areas	All Year	Yes. The tidal marsh and beach strand within the Project Site are suitable habitats for this species.
<i>Melospiza melodia samuelis</i> San Pablo song sparrow	--/CSC/--	Distributed in marshes around San Pablo Bay continuously from Gallinas Creek in the west, along the northern San Pablo Bay shore, and throughout the extensive marshes along the Petaluma, Sonoma, and Napa rivers	Commonly found in saltmarsh, brackish marsh, salt marsh (altered), brackish marsh (altered), and fringe areas, where marsh vegetation is limited to edges of dikes, landfills, or other margins of high ground-bordering salt or brackish water areas	All Year	Yes. The tidal marsh and beach strand within the Project Site are suitable habitats for this species.

Scientific Name Common Name	Federal/State/ CNPS List	Distribution	Habitat Requirements	Period of Identification	Potential to Occur Onsite
<i>Pandion haliaetus</i> Osprey	--/WL/--	Breeds from the Cascade Range south to Lake Tahoe, and along the North Coast Range south to Marin County; regular breeding sites include Shasta Lake, Eagle Lake, Lake Almanor, other inland lakes and reservoirs, and northwest river systems	Associated strictly with large, fish-bearing waters, primarily in ponderosa pine through mixed conifer habitats; uses large trees, snags, and dead-topped trees in open forest habitats for cover and nesting. Requires open, clear waters for foraging such as rivers, lakes, reservoirs, bays, estuaries, and surf zones.	All Year	Yes. Suitable nesting and foraging habitat for this species is present on the Project Site.
<i>Pelecanus occidentalis californicus</i> California Brown pelican	FD/CD, FP/--	Estuarine, marine subtidal, and marine pelagic waters along the California coast	Nests on coastal islands of small to moderate size, which afford immunity from and attack by ground dwelling predators; usually rests on water or inaccessible rocks (either offshore or on mainland), but also uses mudflats, sandy beaches, wharfs, and jetties; forages in open waters by plunge diving typically within 5 miles of shore	All Year	Yes. Although no suitable nesting habitat for this species is present on the Project Site, portions of the Bay, pier, and beach strand located within the Project Site are suitable for foraging.
<i>Phalacrocorax auritus</i> Double-crested cormorant	--/WL/--	A yearlong resident along the entire coast of California and on inland lakes, in fresh, salt, and estuarine waters	Colonial nester on coastal cliffs, offshore islands, and along lake margins in the interior of the state; prefers water less than 9 meters in depth with rocky or gravel bottom; roosts beside water on offshore rocks, islands, steep cliffs, dead branches of trees, wharfs, jetties, or transmission lines; perching sites must be barren of vegetation	All Year	Yes. The Bay, beach strand, and the pier within the Project Site are suitable habitats for this species.

Scientific Name Common Name	Federal/State/ CNPS List	Distribution	Habitat Requirements	Period of Identification	Potential to Occur Onsite
<i>Rallus obsoletus</i> Ridgway's rail	FE/CE/FP	Locally common yearlong in coastal wetlands and brackish areas around the Bay	In saline emergent wetlands, nests mostly in lower zones, where cordgrass is abundant and tidal sloughs are near; builds a platform concealed by a canopy of woven cordgrass stems or pickleweed and gumweed; also uses dead drift vegetation as platform; in fresh or brackish water, builds nest in dense cattail or bulrush; forages in higher marsh vegetation, along vegetation and mudflat interface, and along tidal creeks	All Year	Yes. The tidal marsh within the Project Site is suitable habitat for this species.
<i>Sternula antillarum browni</i> California least tern	FE/CE/FP	Found along the Pacific Coast of California, from San Francisco southward to Baja California	Nest in colonies on relatively open beaches kept free of vegetation by natural scouring from tidal action	All Year	Yes. The beach strand and the Bay within the Project Site are suitable habitats for this species.
<i>Xanthocephalus</i> Yellow-headed blackbird	--/CSC/--	Breeds from central British Columbia eastward to very western Ontario, southward into central California, central New Mexico, and northern Illinois; scattered small populations further east along the Great Lakes to Ohio; winters from southern Arizona and western Texas southward to southern Mexico; some birds winter in California	Breeds in prairie wetlands and along other western lakes and marshes where tall reeds and rushes are present; forages in the wetlands and in surrounding grasslands and croplands; in winter, large flocks forage in agricultural areas	All Year	No. Suitable habitat for this species is not present on the Project Site.

Scientific Name Common Name	Federal/State/ CNPS List	Distribution	Habitat Requirements	Period of Identification	Potential to Occur Onsite
Mammals					
<i>Antrozous pallidus</i> Pallid bat	--/CSC/--	Locally common species at low elevations. It occurs throughout California except for the high Sierra Nevada from Shasta to Kern counties, and the northwestern corner of the State from Del Norte and western Siskiyou counties to northern Mendocino County	Habitats occupied include grasslands, shrublands, woodlands, and forests from sea level up through mixed conifer forests, generally below 2,000 meters. The species is most common in open, dry habitats with rocky areas for roosting. Roosts also include cliffs, abandoned buildings, bird boxes, under exfoliating bark, and under bridges.	All Year	Yes. The annual grassland, coastal scrub, and mixed riparian are suitable habitats for this species.
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	--/CSC/--	Known to occur throughout California, excluding subalpine and alpine habitats; its range extends through Mexico to British Columbia and the Rocky Mountain states; also occurs in several regions of the central Appalachian Mountains	Requires caves, mines, tunnels, buildings, or other cave analog structures such as hallowed out redwoods for roosting; hibernation sites must be cold, but above freezing	All Year	Yes. Abandoned buildings and structures within the ruderal/developed habitat and the pier are suitable habitats within the Project Site.
<i>Microtus californicus sanpabloensis</i> San Pablo vole	--/CSC/--	All known occurrences are in Contra Costa County, in the salt marshes of San Pablo Creek, on the south shore of San Pablo Bay	Grassy habitats associated with salt marshes	All Year	No. Occurrence of this species within the Project Site is unlikely. The salt marsh onsite is extremely small, disjunct from other salt marsh areas, and does not have any grassland habitats associated with it. Although there are several documented occurrences of this species within 5 miles (northeast) of the Project Site, the San Pablo Ridge and vast urban development separate the Project Site from them.

Scientific Name Common Name	Federal/State/ CNPS List	Distribution	Habitat Requirements	Period of Identification	Potential to Occur Onsite
<i>Nyctinomops macrotis</i> Big free-tailed bat	--/CSC/--	Rare in California. Records of the species are from urban areas of San Diego County, and vagrants found in fall and winter; a probable vagrant was collected in Alameda County, but this record is suspect	Big free-tailed bats in other areas prefer rugged, rocky terrain; found to 2,500 meters (8,000 feet) in New Mexico, southern Arizona, and Texas; roosts in buildings, caves, and occasionally in holes in trees; also roosts in crevices in high cliffs or rock outcrops; probably does not breed in California	May-September	No. Suitable habitat for this species is not present on the Project Site.
<i>Reithrodontomys raviventris</i> Salt marsh harvest mouse	FE/CE/FP	Only found in the saline emergent wetlands of the Bay and its tributaries	Critically dependent on dense cover; preferred habitat is pickleweed (<i>Salicornia virginica</i>); seldom found in cordgrass or alkali bulrush; in marshes with an upper zone of peripheral halophytes (salt-tolerant plants), mice use this vegetation to escape the higher tides, and may even spend a considerable portion of their lives there. Mice also move into the adjoining grasslands during the highest winter tides.	All Year	No. Occurrence of this species within the Project Site is unlikely. The salt marsh onsite is extremely small and disjunct from other salt marsh areas. Although there are several documented occurrences of this species within 5 miles (northeast) of the Project Site, the San Pablo Ridge and vast urban development separate the Project Site from them.
<i>Sorex vagrans halicoetes</i> Salt-marsh wandering shrew	--/CSC/--	Salt marshes of the south arm of the Bay	This species prefers a low, dense cover of salicornia.	All Year	No. Occurrence of this species within the Project Site is unlikely. The salt marsh onsite is too small to support this mammal. Although there are several documented occurrences of this species within 5 miles (northeast) of the Project Site, the San Pablo Ridge and vast urban development separates Project Site from them.
Source : Appendix P					

NOTES FOR TABLE 4.3-2:

FEDERAL (USFWS)

- FC Candidate for Federal Listing
- FE Federally Endangered
- FP Federally Protected
- FT Federally Threatened

STATE (California Department of Fish and Game)

- CE California Listed Endangered
- CSC California Species of Special Concern
- CT California Listed Threatened

CNPS: (CRPR)

- 1A Plants Presumed Extinct in California
- 1B Plants Rare, Threatened, or Endangered in California and Elsewhere
- 2B Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere
- 3 Plants About Which We Need More Information – A Review List
- 4 Plants of Limited Distribution – A Watch List

CNPS Threat Ranks:

- 0.1 Seriously Threatened in California (Over 80 percent of occurrences threatened/high degree and immediacy of threat)
- 0.2 Fairly Threatened in California (20 to 80 percent occurrences threatened/moderate degree and immediacy of threat)
- 0.3 Not Very Threatened in California (less than 20 percent of occurrences threatened/low degree and immediacy of threat or no current threats known)

An analysis was conducted to determine which of these regionally occurring special-status species have the potential to occur within the Project Site. Habitat requirements for each species were assessed and compared to the type and quality of habitats observed onsite during the biological surveys. This analysis was also based on pertinent literature, aerial photographs, topographic maps, and the results of the biological site surveys. Several regionally occurring species were eliminated due to lack of suitable habitat within the Project Site, elevation range, lack of suitable soils/substrates, and/or distribution. Regionally occurring special-status species determined to have no potential to occur within the Project Site are not discussed further in this Draft Supplemental Environmental Impact Report (SEIR).

The Project Site was determined to have the potential to support 16 special-status plant species and 24 special-status animal species (six fish, 15 birds, one reptile, and two mammals). The name, regulatory status, distribution, habitat requirements, and period of identification for these species are identified in **Table 4.3-2** and more detail is provided in the text below.

Pallid Manzanita (Arctostaphylos pallida)

Federal Status – Threatened

State Status – Endangered

Other – CNPS 1B.1

Pallid manzanita is a shrub from the heath family (*Ericaceae*) that occurs in broadleaf upland forest, closed-cone coniferous forest, chaparral, cismontane woodland, and coastal scrub habitats. It has an affinity for siliceous shale, sandy, or gravelly substrates at elevations that range from 185-465 meters amsl. Pallid manzanita blooms from December through March. The known range of this species includes Alameda and Contra Costa counties.

The coastal scrub habitat onsite is suitable habitat for this species. It was not observed during surveys for the 2011 FEIR or for the Modified Project. The nearest documented occurrence is located approximately 8 miles east of the Project Site.

Alkali Milkvetch (Astragalus tener var. tener)

Federal Status – None

State Status – None

Other – CNPS 1B.2

Alkali milkvetch is a delicate annual herb from the legume family (*Fabaceae*) that occurs in playas, valley and foothill grasslands on adobe clay, and in alkaline vernal pool habitats at elevations that range from 1-60 meters amsl. This species blooms from March through June. The known range of alkali milkvetch includes Alameda, Contra Costa*, Merced, Monterey*, Napa, San Benito*, Santa Clara*, San Francisco*, San Joaquin*, Solano, Sonoma*, Stanislaus*, and Yolo counties.

The annual grassland onsite is suitable habitat for this species. It was not observed during surveys for the 2011 FEIR or for the Modified Project. The nearest documented occurrence is located approximately 5 miles southeast of the Project Site.

Coastal Bluff Morning-Glory (Calystegia purpurata subsp. saxicola)

Federal Status – None

State Status – None

Other – CNPS 1B.2

Coastal bluff morning-glory is a perennial vine from the morning glory family (*Convolvulaceae*). It occurs in coastal dunes, coastal scrub, and North Coast coniferous forest habitats at elevations that range from 10-105 meters amsl. This species blooms from May through September. The known range of coastal bluff morning-glory includes Contra Costa, Lake, Mendocino, Marin, and Sonoma counties.

The coastal scrub onsite is suitable habitat for this species. It was not observed during surveys for the 2011 FEIR or for the Modified Project. The nearest historical documented occurrence of this species is located approximately 4 miles southeast of the Project Site, though it is considered extirpated.

Point Reyes Salty Bird's-Beak (Chloropyron maritimum ssp. palustre)

Federal Status – None

State Status – None

Other – CNPS 1B.2

Point Reyes salty bird's-beak is a parasitic annual from the figwort family (*Scrophulariaceae*). It occurs in coastal salt marshes and swamps at elevations that range from 0-10 meters amsl. This species blooms from June through October. The known range of Point Reyes salty bird's-beak includes Alameda*, Humboldt, Marin, Santa Clara*, San Mateo*, and Sonoma counties. It also occurs in the State of Oregon.

The tidal marsh and seasonal wetlands onsite are suitable habitat for this species. It was not observed during surveys for the 2011 FEIR or for the Modified Project. There are two documented occurrences (to the northwest and southwest) of this species across the Bay that are within 5 miles of the Project Site. A third occurrence is located approximately 10 miles southeast of the Project Site, on the eastern side of the Bay.

Soft Bird's-Beak (Chloropyron molle subsp. molle)

Federal Status – Endangered

State Status – Rare

Other – CNPS 1B.2

Soft bird's-beak is a hemiparasitic annual from the figwort family (*Scrophulariaceae*). It occurs in coastal salt marshes and swamps at elevations that range from 0-3 meters amsl. This species blooms from July through November. The known range of soft bird's-beak includes Contra Costa, Marin*, Napa, Sacramento*, Solano, and Sonoma* counties.

The tidal marsh and seasonal wetlands onsite are suitable habitat for this species. It was not observed during surveys for the 2011 FEIR or for the Modified Project. There are two documented occurrences of soft bird's-beak that occur approximately 5 miles northeast of the Project Site.

Western Leatherwood (Dirca occidentalis)

Federal Status – None

State Status – None

Other – CNPS 1B.2

Western leatherwood is a deciduous shrub from the mezereum family (*Thymelaeaceae*). It occurs in broadleaf upland forest, closed-cone coniferous forest, chaparral, cismontane woodland, North Coast coniferous forest, riparian forest, and in mesic areas within riparian woodland habitats. It can be found at elevations that range from 25-425 meters amsl. Western leatherwood blooms from January through March, though the bloom period can occasionally extend through April. The known range of this species includes Alameda, Contra Costa, Marin, Santa Clara, San Mateo, and Sonoma counties. Western leatherwood is a monotypic genus and the only species within the mezereum family that occurs in California.

The mixed riparian habitat onsite is suitable habitat for this species. It was not observed during surveys for the 2011 FEIR or for the Modified Project. There are four documented occurrences of this species within approximately 10 miles east/southeast of the Project Site.

Fragrant Fritillary (Fritillaria liliacea)

Federal Status – None

State Status – None

Other – CNPS 1B.2

Fragrant fritillary is a bulbous perennial herb from the lily family (*Liliaceae*). It occurs in cismontane woodland, coastal prairie, coastal scrub, and valley and foothill grassland (often serpentine) habitats at elevations that range from 3-410 meters amsl. This species blooms from February through April. The known range of fragrant fritillary includes Alameda, Contra Costa, Monterey, Marin, San Benito, Santa Clara, San Francisco, San Mateo, Solano, and Sonoma counties. This species is noted for having generally more than four alternate, linear to ovate (not sickle-shaped) leaves, and obscure nectaries. The petals are characteristically white with faint green stripes.

The coastal scrub and annual grassland habitats onsite are suitable for this species; however, presence of this species is unlikely given that serpentine soils are not present on the Project Site. It was not observed during surveys for the 2011 FEIR or for the Modified Project. The nearest documented occurrence of this species is located approximately 2 miles southeast of the Project Site.

Diablo Helianthella (Helianthella castanea)

Federal Status – None

State Status – None

Other – CNPS 1B.2

Diablo helianthella is perennial herb from the composite family (*Asteraceae*). It occurs in broadleaf upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, and valley and foothill grassland habitats at elevations that range from 60-1,300 meters amsl. Diablo helianthella blooms from March through June. The known range of this species includes Alameda, Contra Costa, Marin*, San Diego, San Francisco*, and San Mateo counties.

The coastal scrub, mixed riparian, and annual grassland habitats onsite are suitable for this species. It was not observed during surveys for the 2011 FEIR or for the Modified Project. There are seven documented occurrences of this species approximately 10 miles northeast, east, and southeast of the Project Site.

Loma Prieta Hoita (Hoita strobilina)

Federal Status – None

State Status – None

Other – CNPS 1B.1

Loma Prieta hoita is a gland-dotted perennial herb in the legume family (*Fabaceae*). It occurs in chaparral, cismontane woodland, and riparian woodland (usually serpentine and mesic regions) habitats at elevations that range from 30-860 meters amsl. This species blooms from May through July, but the bloom season can extend into August, September, and October. The known range Loma Prieta hoita includes Alameda*, Contra Costa, Santa Clara, and Santa Cruz counties.

The riparian woodland onsite is suitable for this species; however, presence of this species is unlikely given that serpentine soils are not present on the Project Site. It was not observed during surveys for the 2011 FEIR or for the Modified Project. There are three documented occurrences of it within 6 miles east of the Project Site.

Santa Cruz Tarplant (Holocarpha macradenia)

Federal Status – Threatened

State Status – Endangered

Other – CNPS 1B.1

Santa Cruz tarplant is an annual, strongly aromatic herb from the composite family (*Asteraceae*). It occurs in coastal prairie, coastal scrub, and valley and foothill grassland (often clay, sandy) habitats at elevations that range from 10-220 meters amsl. This species blooms from June through October. The known range of Santa Cruz tarplant includes Alameda*, Contra Costa*, Monterey, Marin*, and Santa Cruz counties.

The coastal scrub and annual grassland onsite are suitable habitats for this species. It was not observed during surveys for the 2011 FEIR or for the Modified Project. There are 17 documented occurrences of this species within 10 miles of the Project Site with the nearest occurring approximately 5 miles to the east.

White Fairypoppy (Meconella oregana)

Federal Status – None

State Status – None

Other – CNPS 1B.1

White fairypoppy is an annual herb known to occur in Oregon, Washington, and California. Within California it is documented within Contra Costa, Monterey, Santa Clara, and San Luis Obispo counties. It can be found in coastal prairies or coastal scrub habitat. It can also be found in wetland habitat on occasion. The plant itself is small, reaching up to 16 centimeters in height and producing small white

flowers. Within California, white fairypoppy is found almost exclusively within the central coast and the Bay Area.

The coastal scrub and wetlands onsite are suitable habitats for this species. It was not observed during surveys for the 2011 FEIR or for the Modified Project. All known occurrences of this species are greater than 5 miles from the Project Site.

Long-styled Sand-spurry (Spergularia macrotheca var. longistyla)

Federal Status – None

State Status – None

Other – CNPS 1B.2

Long-styled sand-spurry, or sticky sandspurry, is a perennial herb found in wetland to riparian habitat. It produces small white flowers blooming from February to May, and occasionally into June. This plant is most commonly found on alkaline soils and is endemic to California. It is only known to occur within Alameda, Contra Costa, Napa, and Solano counties, although its full range may extend farther north or south of the central coastline due to the presence of suitable habitat and lack of targeted surveys for this species.

Wetlands and riparian habitat onsite are suitable for this species. It was not observed during surveys for the 2011 FEIR or for the Modified Project. The nearest documented occurrence of this species is located less than 1 mile northeast of the Project Site.

Most Beautiful Jewelflower (Streptanthus albidus ssp. peramoenus)

Federal Status – None

State Status – None

Other – CNPS 1B.2

Most beautiful jewelflower is an annual herb in the *Brassicaceae* family that occurs in chaparral, cismontane woodland, and valley and foothill grassland (occasionally serpentine soils) at elevations that range from 94-100 meters amsl. This species blooms from April through September, though the bloom period can extend from March through October. The range of most beautiful jewelflower includes Alameda, Contra Costa, Monterey, Santa Barbara, Santa Clara, San Luis Obispo, and Stanislaus counties.

The annual grassland onsite is suitable habitat for this species. It was not observed during surveys for the 2011 FEIR or for the Modified Project. The nearest documented occurrence is less than 5 miles northeast of the Project Site.

California Seablite (Suaeda californica)

Federal Status – Endangered

State Status – None

Other – CNPS 1B.1

California seablite is a mound-like shrub in the *Chenopodiaceae* family that occurs in coastal salt marshes and swamps at elevations that range from 0-15 meters amsl. This species blooms from July

through October. The range of California seablite includes Alameda*, Contra Costa*, Santa Clara*, San Francisco*, and San Luis Obispo counties.

The tidal marsh is suitable habitat for this species, though this represents an extremely small habitat. It was not observed during surveys for the 2011 FEIR or for the Modified Project. The nearest documented occurrence is located approximately 5.5 miles southeast of the Project Site.

Suisun Marsh Aster (Symphyotrichum lentum)

Federal Status – None

State Status – None

Other – CNPS 1B.2

Suisun marsh aster is a perennial herb with long rhizomes that occurs in brackish and freshwater marshes and swamps at elevations that range from 0-3 meters amsl. This species blooms from May through November. The range of Suisun marsh aster includes Contra Costa, Napa, Sacramento, San Joaquin, and Solano counties.

Several of the seasonal wetland features within the Project Site are suitable habitat for this species. This species has been documented onsite during both the 2011 FEIR and Modified Project surveys.

Saline Clover (Trifolium hydrophilum)

Federal Status – None

State Status – None

Other – CNPS 1B.2

Saline clover is a fleshy annual herb that occurs in marshes and swamps, vernal pools, and valley and foothill grasslands. Within grassland habitats, saline clover has an affinity to alkaline soils or mesic areas. This species occurs at elevations that range from 0-300 meters amsl. Saline clover blooms from April through June. The known range of this species includes Alameda, Colusa, Monterey, Napa, San Benito, Santa Clara, Santa Cruz, San Luis Obispo, San Mateo, Solano, and Sonoma counties, although the status and/or identity of the occurrences in Colusa County is uncertain.

Wetland and bordering grassland habitat onsite are suitable habitat for this species. It was not observed during surveys for the 2011 FEIR or for the Modified Project. The nearest documented occurrence is located approximately 1.75 miles southeast of the Project Site.

Green Sturgeon (Acipenser medirostris) [Southern DPS]

Federal Status – Threatened

State Status – Species of Special Concern (CSC)

Other- None

Green sturgeon are believed to spend a majority of their lives in nearshore oceanic waters, bays, and estuaries. Spawning occurs every two to five years. Adults usually migrate into fresh water around late February, with spawning occurring March-July, and with peak activity from April-June. Juveniles will spend a few years in fresh and estuarine waters before they travel out to saltwater in the ocean. Sturgeon are long-lived, slow-growing, and do not mature until at least 15 years old, with a maximum age of

60-70 years old. Most males range from 4.5-6.5 feet, and most females range from 5-7 feet; all can weigh up to 350 pounds. They typically eat benthic invertebrates. They have five rows of bony plates on their body (scutes), and their backbone curves upward into a caudal fin, forming a shark-like tail.

Suitable habitat for this species occurs in the portion of the Project Site that includes the open waters of the Bay. No freshwater habitat for this species occurs on the Project Site. Targeted surveys for this species have not occurred, but NMFS reports assume presence of this species within the Bay.

Coho Salmon (*Oncorhynchus kisutch*) [Central California Coast ESU]

Federal Status – Endangered

State Status – Endangered

Other – None

Coho salmon have the typical anadromous life history strategy of other Pacific salmonids, but are predominantly a winter-run species in California. Coho in this ESU migrate out of the marine environment into freshwater rivers and streams from which they were born to spawn. Migration peaks from November through January for southern ESUs, while migration can start as soon as October for the northern ESUs. Actual spawning tends to occur during the months of January and February. Coho spawn only once in their lifetime, at approximately three years of age, and then die. They typically spawn in streams that are directly tributary to the ocean or lagoons with riffle complexes and stable, silt-free, coarse gravel substrates and require cover, cool water, and sufficient dissolved oxygen. Young coho will remain in these inland streams for one to two years. Juveniles tend to migrate to the marine environment within approximately one year after hatching. Out migration for juvenile coho within this ESU peaks in April and May during high spring flows. The coho salmon Central California Coast ESU includes all naturally spawned populations of coho salmon from Punta Gordon in northern California south to and including the San Lorenzo River in central California, as well as populations in tributaries to the Bay, excluding the Sacramento/San Joaquin River system and four other artificial propagation programs. The range of the Central California Coast coho ESU includes portions of Alameda, Contra Costa, Marin, Mendocino, Napa, San Francisco, San Mateo, Santa Clara, Santa Cruz, Solano, and Sonoma counties. NMFS critical habitat has been designated for the Central California Coast coho ESU though a recovery plan has not yet been finalized.

Suitable habitat for this species occurs in the portion of the Project Site that includes the open waters of the Bay. No freshwater habitat for this species occurs on the Project Site. Targeted surveys for this species have not occurred, but NMFS reports assume presence of this species within the Bay.

Steelhead (*Oncorhynchus mykiss irideus*) [Central California Coast DPS]

Federal Status – Threatened

State Status – None

Other-None

Steelhead are the anadromous form of rainbow trout. Juveniles remain in the freshwater environment for one to two years prior to their migration into the ocean. Once they mature, steelhead migrate to the marine environment to utilize the high productivity of the ocean where they can grow to very large sizes. Once these fish have reached sexual maturity, they migrate back to their natal streams to spawn. Unlike other types of salmonids, steelhead are capable of spawning multiple times throughout their life and do

not typically die immediately after spawning. The steelhead in the Central California Coast ESU are a winter-run species. Winter-run steelhead typically migrate from November through April and spawn shortly after they arrive to their natal spawning habitat. Although steelhead in this ESU are classified as a winter-run species, hydro-modification has fundamentally changed the life history strategies of these fish over time. As cold waters persist at predictable flow patterns from dams on an annual basis, the occurrence of this species can be outside the November to April migratory window. This species has an average lifespan of six to seven years. The range of the steelhead in the Central California Coast ESU includes all naturally spawned populations of steelhead in coastal streams from the Russian River to Aptos Creek, and the drainages of San Francisco, San Pablo, and Suisun bays eastward to Chipps Island at the confluence of the Sacramento and San Joaquin rivers; and tributary streams to Suisun Marsh including Suisun Creek, Green Valley Creek, and an unnamed tributary to Cordelia Slough (often referred to as Red Top Creek), exclusive of the Sacramento-San Joaquin River Basin of the California Central Valley, and two additional artificial propagation programs. The range includes portions of Alameda, Contra Costa, Marin, Mendocino, Napa, San Francisco, San Mateo, Santa Clara, Santa Cruz, Solano, and Sonoma counties. NMFS critical habitat has been designated for the Central California Coast steelhead ESU.

Suitable habitat for this species occurs in the portion of the Project Site that includes the open waters of the Bay. No freshwater habitat for this species occurs on the Project Site. Targeted surveys for this species have not occurred, but NMFS reports assume presence of this species within the Bay.

***Steelhead (Oncorhynchus mykiss irideus)* [Central Valley DPS]**

Federal Status – Threatened

State Status – None

Other- None

The Central Valley DPS of steelhead includes all naturally spawned populations in the Sacramento and San Joaquin rivers and their tributaries, excluding steelhead from the San Francisco and San Pablo bays and their tributaries. Steelhead are the anadromous form of rainbow trout. Juveniles remain in the freshwater environment for one to two years prior to their migration to the ocean. Once mature, steelhead migrate to the marine environment to utilize the high productivity of the ocean where they can grow to very large sizes. Once these fish have reached sexual maturity, they migrate back to their natal streams to spawn. Unlike other types of salmonids, steelhead are capable of spawning multiple times throughout their life and do not typically die immediately after spawning. As cold waters persist at predictable flow patterns from dams on an annual basis, the occurrence of this species can be outside the November to April migratory window. This species has an average lifespan of six to seven years.

Suitable habitat for this species occurs in the portion of the Project Site that includes the open waters of the Bay. No freshwater habitat for this species occurs on the Project Site. Targeted surveys for this species have not occurred, but NMFS reports assume presence of this species within the Bay.

***Chinook Salmon (Oncorhynchus tshawytscha)* [Central Valley Spring Run ESU]**

Federal Status – Threatened

State Status – Threatened

Other – None

Historically, spring-run Chinook represented the most abundant run of salmon within California. Spring-run Chinook salmon were listed as threatened under both the ESA and CESA in 1999. Spring-run Chinook typically enter natal waters to spawn between March and September. Hybridization of early spring-run with late fall-run Chinook has contributed to population decline. Successful spawning relies on streams with pool and riffle complexes with cold water and gravelly streambeds. Natal waters occur along the Sacramento River and Feather River tributaries.

Suitable habitat for this species occurs in the portion of the Project Site that includes the open waters of the Bay. No freshwater habitat for this species occurs on the Project Site. Targeted surveys for this species have not occurred, but NMFS reports assume presence of this species within the Bay.

***Chinook Salmon (Oncorhynchus tshawytscha)* [Sacramento River Winter Run ESU]**

Federal status – Endangered

State status – Endangered

Other – None

The Sacramento River winter-run Chinook salmon ESU includes winter-run Chinook salmon spawning naturally in the Sacramento River and its tributaries, as well as winter-run Chinook salmon that are part of the conservation hatchery program at the Livingston Stone National Fish Hatchery. It can be found in cool, clear, fast-flowing permanent streams and rivers with riffles and ample cover from riparian vegetation or overhanging banks. Spawning requires streams with pool and riffle complexes. For successful breeding, Chinook salmon require cold water and gravelly streambeds.

Suitable habitat for this species occurs in the portion of the Project Site that includes the open waters of the Bay. No freshwater habitat for this species occurs on the Project Site. Targeted surveys for this species have not occurred, but NMFS reports assume presence of this species within the Bay.

***Green Sea Turtle (Chelonia mydas)* [East Pacific Ocean]**

Federal Status – Threatened

State Status – None

Other – None

Green sea turtles are found within shallow waters of reefs, bays, and inlets when not migrating. They express a strong site fidelity, with females often returning to the same nesting beach throughout their life. These beaches must be open and support an aggregation of nesting individuals. Clutch sizes can range between 75-200 eggs. Adult green sea turtles can grow to four feet in length, weigh up to 400 pounds, and feed almost exclusively on seagrasses and marine algae. The central California coast is outside of green sea turtle breeding range, but known occurrences of this species have been documented within the Bay.

The navigable open waters and eelgrass beds of the Project Site represent suitable habitat for this species.

Cooper's Hawk (Accipiter cooperii)

Federal Status – None

State Status – Watch list

Other- None

The Cooper's hawk, like other species of its family (*Accipitridae*) is adapted for hunting prey in flight through woodland. Members of the *Accipiters* family possess short, broad wings and long tails, which provide excellent maneuverability. Small birds make up the majority of its diet; an assortment of small mammals, reptiles, and amphibians comprise the rest. Prey is often chased in flight through dense forests or run down in dense thickets. An individual will often make low, gliding search flights, flushing prey before pursuit. The Cooper's hawk is rarely found outside of patchy to dense woodland habitat; and are most frequently documented near dense stands of live oak, riparian deciduous, or other forest habitats near water. They are also known to frequent residential bird feeders to find prey.

Nesting usually occurs near streams in second-growth conifer stands or deciduous riparian areas. Breeding takes place from March through August.

Marginal foraging habitat is present on the Project Site. Due to the sparse and small nature of riparian habitat onsite, it is extremely unlikely that this species would nest onsite. The nearest documented occurrence is greater than 10 miles southeast of the Project Site.

Short-Eared Owl (Asio flammeus)

Federal Status- Species of Special Concern (CSC)

State Status- None

Other- None

The short-eared owl is a ground nesting bird that, unlike most owls, is active during daytime hours. Hunting may also occur during the day, but efforts are concentrated during dawn and dusk. Breeding occurs predominantly into Canada to as far south as the Oregon and California border. The remainder of California is considered over-wintering habitat for this species. Its diet consists of rodents, small birds, and other small prey items, which it locates by sound assisted by sight. This species prefers open grasslands with low or few trees.

The annual grassland and wetlands within the Project Site are suitable foraging and nesting habitats for this species. There are two documented occurrences of the short-eared owl within less than 5 miles of the Project Site. The nearest occurrence is located approximately 2 miles northeast of the Project Site.

Western Snowy Plover (Charadrius alexandrinus nivosus)

Federal Status – Threatened

State Status – Species of Special Concern (CSC)

Other – None

The western snowy plover is a year-round resident of coastal California, breeding primarily above the high tide line on coastal beaches, sand spits, dune-backed beaches, sparsely vegetated dunes, beaches at creek and river mouths, and salt pans at lagoons and estuaries. This is a ground-nesting bird that feeds almost exclusively on aquatic invertebrates. Females raise two to three broods within a breeding

season depending on the length and conditions of the season. Chicks leave the nest and forage within several hours of hatching, but still require parental care for several days after hatching.

The beach strand and tidal marsh on the Project Site represent suitable habitat for this species. The nearest occurrence is located approximately 8.5 miles northwest of the Project Site.

Northern Harrier (Circus cyaneus)

Federal Status – None

State Status – Species of Concern (CSC)

Other- None

Northern harriers occur year-round in the Central Valley, along the coast, in the Sierra Nevadas, and in northeastern California, wintering throughout California in suitable habitat. In general, northern harriers occur in meadows, grasslands, open rangelands, desert sinks, fresh and saltwater emergent wetlands, and very occasionally in wooded areas. Suitable foraging habitat for this species consists of open areas, such as grassland or agricultural fields, where it can fly close to the ground. Northern harriers eat small mammals (such as voles), birds, frogs, small reptiles, crustaceans, insects, and rarely fish, and roost on the ground in tall grasses or emergent wetland species such as cattails. Nesting habitat is generally in marshes or emergent wetlands or along rivers or lakes. However, this species is known to nest in grasslands, grain fields, or on sagebrush flats. Nests are built on the ground using a mound of sticks, and nesting season occurs from April to September.

The coastal scrub, annual grassland, mixed riparian, and wetlands within the Project Site may be suitable nesting and/or foraging habitats for this species and other habitats onsite may provide suitable foraging habitat.

White-Tailed Kite (Elanus leucurus)

Federal Status – None

State Status – Fully Protected

Other- None

White-tailed kites are yearlong residents in the Central Valley, Coast Ranges, and coastal areas in California. Foraging for this species occurs in open grasslands, meadows, farmland, and emergent wetlands. Prey of the white-tailed kite includes small mammals, small birds, voles, amphibians, reptiles, and insects. This roosting habitat for this species consists of trees with dense canopies and the nesting habitat is located near suitable foraging habitat. Nest trees range from single isolated trees, to trees within relatively large stands. Nesting takes place from February through October with a peak season ranging May to August. White-tailed kite is a yearlong resident throughout most of California. This species forages in open grasslands, meadows, agricultural fields, and emergent wetlands. White-tailed kite nests in a variety of forested habitats and often selects oaks, cottonwood, or eucalyptus trees to build their nests in trees. This species nests from February through August and females incubate their eggs for an average of 30 days. White-tailed kites can have up to two broods per year and their young usually fledge within 40 days of hatching.

The Project Site contains suitable habitat for all life stages of this species, including foraging and nesting. The nearest documented occurrence of this species is approximately 1.5 miles east of the Project Site.

Salt Marsh Yellowthroat (Geothlypis trichas sinuosa)

Federal Status – None

State Status – Species of Concern (CSC)

Other – None

The salt marsh yellowthroat is one of three subspecies of common yellowthroat that reside and breed in California. The salt marsh yellowthroat, the smallest of the subspecies, is endemic to the Bay Area, though there is evidence that it migrates as far south as San Diego County. It breeds as far north as the Tomales Bay, east as the Carquinez Strait, and into the coastal regions of Santa Cruz County. The nesting season for salt marsh yellowthroats extends from March through July. This subspecies forages in fresh and saltwater marshes, coastal swales, riparian thickets, and disturbed or weedy habitats that are adjacent to swamps or tidally influenced zones. The nearest documented occurrence of salt marsh yellowthroat is located approximately 9 miles southwest of the Project Site, within Marin County. It has also been documented within Contra Costa County.

The tidal marsh, wetlands, mixed riparian, invasive scrub, and beach strand within the Project Site may be suitable nesting and/or foraging habitats for salt marsh yellowthroat. The nearest known occurrence of this species is approximately 10 miles south of the Project Site.

Bald Eagle (Haliaeetus leucocephalus) (Wintering and Nesting)

Federal Status – Delisted

State Status – Endangered; Fully Protected

Other- None

In 1995, the USFWS reclassified the bald eagle under the ESA from endangered to threatened in the contiguous 48 states, excluding Michigan, Minnesota, Wisconsin, Oregon, and Washington where it had already been listed as threatened. In 2007, the bald eagle was fully delisted from the ESA. Bald eagles typically nest in forested areas, relatively close (usually less than 1.5 miles) to water that offers foraging opportunities. Nests are most often placed in large old growth trees and occasionally on cliff faces. Nests are often reused from year to year. In California, breeding takes place from February to July. While fish make up a large portion of the diet of a bald eagle, the bird will also feed opportunistically on a variety of mammals, birds, and carrion. The bald eagle is a well-known cleptoparasite and scavenger, stealing food from conspecifics and Osprey and traveling long distances for dependable carcasses.

Although suitable nesting habitat is not readily provided by the Project Site, open water and suitable foraging habitat for this species indicates that presence outside of breeding is possible. The nearest known occurrence of this species is approximately 9 miles east of the Project Site.

California Black Rail (Laterallus jamaicensis coturniculus)

Federal Status – None

State Status – Threatened

Other – Fully Protected

California black rail is a small-sized secretive bird. It is black with white speckles above, has a chestnut nape, and is gray-black with narrow white bars below. Unlike other rails, this species is most vocal in the middle of the night. It occurs in riparian communities, typically where willow, cottonwood, and/or

salt-cedar are dominants, and in salt marshes, shallow freshwater marshes, wet meadows, and in other inundated areas that have emergent vegetation. California black rail occurs along coastal areas in the eastern, southern, and western U.S. and has an irregular and patchy distribution in several inland states. In California, this species is a year-round resident throughout most of its range, which includes the San Francisco Bay estuary, Bodega Bay, Tomales Bay, Bolinas Lagoon, Sacramento-San Joaquin Delta, Morro Bay, central and southern coasts, the Salton Sea, and the lower Colorado River Basin. In southern California, this species is largely confined to the Colorado River. California black rails nest from February through June.

The tidal marsh and wetlands within the Project Site are suitable habitats for this species. There are four documented occurrences of this species within 5 miles of the Project Site.

Alameda Song Sparrow (Melospiza melodia pusillula)

Federal Status – None

State Status – Species of Special Concern (CSC)

Other – None

The Alameda song sparrow is a year-round resident of nearshore habitat in the Bay Area. This species prefers tidal marsh habitat with cordgrass, pickleweed, or gumplant. Low and dense vegetative ground cover is required for nesting with a shrub cover present for song performance. This species has a high tolerance for high-salinity marsh habitat and may preferentially select high-salinity habitat where other sparrows avoid or cannot tolerate it. Loss of contiguous tidal marsh habitat has led to a significant decline of this species.

The tidal marsh and beach strand within the Project Site are suitable habitats for this species. There are two documented occurrences of this species within 5 miles of the Project Site. The closest occurrence is located approximately 3 miles southeast of the Project Site.

San Pablo Song Sparrow (Melospiza melodia samuelis)

Federal status – None

State status – Species of Special Concern

Other – USFWS Bird of Conservation Concern

The San Pablo song sparrow is distributed in marshes around San Pablo Bay continuously from Gallinas Creek in the west, along the northern San Pablo Bay shoreline, and throughout the extensive marshes along the Petaluma, Sonoma, and Napa rivers. It is commonly found in saltmarsh, brackish marsh, salt marsh (altered), brackish marsh (altered), and fringe areas, where marsh vegetation is limited to edges of dikes, landfills, or other margins of high ground bordering salt or brackish water areas. Its diet consists of primarily terrestrial invertebrates in the marsh plain. It requires dense vegetation for nesting usually built from California cord grass (*Spartina foliosa*), pickleweed (*Salicornia virginica*), and gumplant (*Grindelia stricta*).

The tidal marsh and beach strand within the Project Site are suitable habitats for this species. There are seven documented occurrences of this species within 5 miles of the Project Site. The closest occurrence is located approximately 1 mile northeast of the Project Site.

Osprey (Pandion haliaetus)

Federal Status – None

State Status – Species of Special Concern

Other-None

Osprey are known to breed in northern California from the Cascade Range, south to Lake Tahoe and along the coast south to Marin County. Osprey arrive on their nesting grounds in mid-March to early April and breed from March until September. During the non-breeding season, they migrate south along the coast and western slope of the Sierra Nevadas in October to Central and South America. Habitat requirements for cover and nesting include large trees, snags, and dead topped trees in open forest habitats. Foraging requires clear, open waters. Osprey utilize rivers, lakes, reservoirs, bays, estuaries, and surf zones, where they swoop down from flight, hover, or perch to catch fish. Osprey also prey on mammals, birds, reptiles, amphibians, and invertebrates.

The Project Site provides suitable nesting and foraging habitat for this species. Osprey and osprey nests were both observed during surveys for the 2019 Modified Project within eucalyptus woodland and on wooden posts similar to utility poles in disturbed areas.

California Brown Pelican (Pelecanus occidentalis californicus)

Federal Status – Delisted

State Status – Fully Protected

Other – None

The California brown pelican is a locally common breeder and visitor in California. This is one of six recognized subspecies. The California brown pelican occurs in estuarine, marine, subtidal, and marine pelagic waters. It frequents the open-ocean, offshore islands, coastal areas, harbors, piers, and breakwaters. The range of this subspecies includes the entire coast of California, including the Channel Islands. The California brown pelican also occurs in the Salton Sea and Colorado River reservoirs within Riverside, San Diego, and Imperial counties. California brown pelicans typically build their nests on the ground or on steep cliffs and the breeding season occurs March through August. After breeding, individuals leave their nesting colonies and disperse along the coast. Critical habitat has not been designated for this subspecies.

The Project Site does not provide suitable nesting habitat for this species, however, portions of the Bay, pier, and beach strand located within the Project Site are suitable foraging habitats for this species. They have been sighted off the shore of the Project Site during many of the surveys, including in 2019.

Double-crested Cormorant (Phalacrocorax auritus)

Federal Status – None

State Status – Watch list

Other – None

The double-crested cormorant subsists on a fish diet and requires a water body large enough to support its diet and colonial lifestyle. This species is a ground or tree nester, and while nesting does require aquatic habitat nearby, suitable foraging habitat can be up to 40 miles from the breeding colony. The California coastline can represent year-round habitat for this bird, with migratory populations breeding in

central Canada through parts of the Midwest. Chicks are dependent upon parental care and begin flying at approximately 9-10 weeks of age. Adults are brown to black in color and have an orange patch of skin on the face near the beak.

The Bay, beach strand, and the pier within the Project Site are suitable habitats for this species. The nearest documented occurrence of it is less than 10 miles south/southeast of the Project Site.

Ridgway's Rail (Rallus obsoletus obsoletus)

Federal Status – Endangered

State Status – Endangered

Other – Fully Protected

Ridgway's rail is an uncommon year round resident of the Bay Area. This species requires tidal marshes or marsh-like wetlands with dense vegetation. Diet is varied and may consist of crustaceans, insects, fish, and occasionally seeds if desperate. Feeding behavior consists of probing within shallow waters. Nests are constructed on the ground out of grasses and sedges. Young will leave the nest almost immediately after hatching, but will be dependent upon parental care for approximately two weeks after hatching.

The tidal marsh within the Project Site is suitable habitat for this species. There are seven documented occurrences of this species within 5 miles of the Project Site. The nearest occurrence is located approximately 1.5 miles northeast of the Project Site.

California Least Tern (Sternula antillarum browni)

Federal Status – Endangered

State Status – Endangered

Other – Fully Protected

The California least tern is a colonial ground nester that prefers relatively open and flat beaches to nest on. Breeding range for this species includes central California south to about Baja California. Females raise a single clutch per year consisting of two to three eggs and are distinguished from other terns by their smaller size and predominantly grey underbelly. California least terns forage on small fish and aquatic invertebrates. When not breeding, this species is not colonial and can be found alone or in small groups.

The beach strand and the Bay within the Project Site are suitable habitats for this species. The nearest documented occurrence is greater than 10 miles south/southeast of the Project Site.

Pallid Bat (Antrozous pallidus)

Federal – None

State – Species of Concern (CSC)

Other - None

The pallid bat is a medium-sized bat with large wide ears that are clearly separated at the base. This species occurs in a wide variety of habitats including grasslands, shrub lands and chaparrals, woodlands, and forests. It is most abundant in open dry habitats that have abundant rocky areas for roosting. It forages over open ground and is mostly a nocturnal hunter. Pallid bats are most active during the dawn

and dusk hours. This species will establish daytime roosts in caves, crevices, mines, large hollow trees, and unoccupied buildings. Pallid bats mate during the months of October through February and most are born from April through July. The range of pallid bat includes most of California with the exception of the high Sierra Nevadas from Shasta to Kern counties and the northwestern-most corner of the State.

The annual grassland, coastal scrub, and mixed riparian are suitable habitats for this species within the Project Site. Abandoned buildings and structures within the ruderal/developed habitat and the pier are also suitable habitats. There are four documented occurrences within 10 miles of the Project Site.

Townsend's Big-Eared Bat (*Corynorhinus townsendii*)

Federal Status – None

State Status – Species of Special Concern

Other - None

Townsend's big-eared bat is found throughout California in all habitats except subalpine and alpine, with the greatest abundance in mesic habitats. Within these habitats, they require caves, mines, tunnels, buildings, or other fabricated structures for roosting. This species forages nocturnally along habitat edges gleaning over brush and trees using echolocation with peak foraging occurring late in the evening preceded by flights close to the roost. Townsend's big-eared bats hibernate from October to April. Mating typically occurs from November to February, but many females are inseminated before hibernation begins. Townsend's big-eared bats are extremely sensitive to roosting site disturbance; one visit can result in roost abandonment.

Abandoned buildings and structures within the ruderal/developed habitat and the pier are suitable habitats for this species. The nearest documented occurrence is 5 miles south of the Project Site on Angel Island. Three other inland occurrences of this species occur within 10 miles of the Project Site.

4.3.3.5 Invasive Species and Disease Vectors

Potentially hazardous or undesirable biological resources on the Project Site include invasive species and disease vectors. As described in **Section 4.3.3.2**, eucalyptus woodland, annual grassland, invasive scrub, and ruderal/disturbed habitats are dominated by invasive or ornamental plant species.

Contra Costa Health Services (CCHS) defines vector-borne diseases as those that are transmitted to humans from mosquitoes, ticks, and fleas via a bite. Two diseases are listed by CCHS as zoonotic and vector-borne: Lyme disease and West Nile virus (CCHS, 2019).

Lyme disease is caused from the bacterium *Borrelia burgdorferi* and occasionally *Borrelia mayonii* (Centers for Disease Control and Prevention [CDC], 2019). The vector that transmits the bacteria to humans in California is the western black-legged tick (*Ixodes pacificus*). Only an infected adult tick can transmit the bacterium from the tick to a human when the tick is feeding on blood from its host for at least 24 hours. Early symptoms of Lyme disease can include expanding skin rash, chills, fevers, swollen lymph nodes, headache, muscle and joint pain, heart irregularities, and weakness of muscles in the face. If untreated, worsening symptoms can materialize, such as arthritis and nervous system abnormalities

(California Department of Public Health, n.d.). In Contra Costa County (County), approximately 0.13 incidences per 100,000 people occur each year (CDC, n.d.).

West Nile virus is a mosquito-borne illness transferred by the bite of an infected mosquito. There are currently no vaccines or treatment options for West Nile virus, however only one in every 150 cases result in serious illness. A total of 24,657 cases of West Nile virus were documented in the U.S. between 1999 and 2018, including 2,330 deaths (or five percent of clinical cases) (CDC, 2019). In the County, there is approximately one incidence of West Nile virus per every 200,000 individuals.

4.3.4 2011 FEIR ANALYSIS

This section provides a summary of the impacts to biological conditions analyzed for the Casino Project of the 2011 FEIR, followed by a description of any changes since the 2011 FEIR that relate to biological resources.

4.3.4.1 2011 FEIR Summary of Impacts

Impacts

Thresholds of significance used to measure impacts to biological resources in the 2011 FEIR follow a similar structure to those criteria outlined in **Section 4.3.5**. The Casino Project as evaluated in the 2011 FEIR represents the most similar alternative to the Modified Project. Under the Casino Project of the FEIR, significant impacts were identified to biological resources in the following areas.

- Direct and indirect impacts to sensitive habitat types
- Direct and indirect impacts to federally protected Wetlands and Waters of the U.S.
- Indirect impacts to special-status fish species
- Significant disturbance to birds, including disturbance of nesting birds from noise or nest removal and stranding of migratory birds due to permanent lighting
- Significant loss of roosting and foraging habitat for special-status bats

The 2011 FEIR identified mitigation measures that would result in maximum practicable avoidance of sensitive biological resources. Mitigation for sensitive habitats not avoided through site design included preservation, restoration, or creation of in-kind habitat at a 2:1 ratio protected within an open space preserve by a permanence agreement. In addition to permit requirements for unavoidable impacts to riparian habitats and Wetlands and Waters of the U.S., a minimum of 50-foot setbacks with high-visibility fencing were included as mitigation, with supervision by a qualified biologist during any nearby construction activities. Setbacks of 50 feet, high-visibility fencing, and biological monitoring during construction was also recommended for beach strand and tidal marsh habitat. Additional mitigation was identified specifically for eelgrass and included complete avoidance of direct impacts and restrictions on uses of the existing pier use and rehabilitation. Annual monitoring of eelgrass to assess potential indirect impacts and determine additional necessary mitigation through consultation with NMFS was included in the 2011 FEIR. A comprehensive Vegetation Management Plan was included in the mitigation measures to address open space management, invasive species management, parklands management, and wildlife prevention.

The 2011 FEIR identified mitigation for impacts to special-status species in addition to mitigation for sensitive habitat. The Suisun marsh aster was the only identified special-status plant. While avoided through the Casino Project design, the 2011 FEIR additionally identified a mitigation measure that required a 50-foot high-visibility setback for the Suisun marsh aster, with biological monitoring, during construction activities nearby. Finally, 2011 FEIR measures included a requirement that if the Suisun marsh aster became established within the development footprint, consultation with the CDFW would be required to determine if transplanting or other compensatory actions would be appropriate and required implementation of such actions. Impacts to special-status birds and nests were addressed through mitigation measures requiring pre-construction nesting bird surveys, establishment of high-visibility nest buffers, removal of man-made attractants of nest predators, and requirement for an Incidental Take Permit from the CDFW in the event that take of a special-status species was unavoidable. Additionally, restrictions on allowable lighting on the Project Site were outlined in order to minimize impacts to shorebirds and migratory birds. Finally, the 2011 FEIR mitigation measures identified pre-construction surveys of suitable bat roost habitat with evacuation facilitated by a qualified biologist should bats or evidence of bat presence be observed.

Based on the identified impacts to biological resources analyzed under the Casino Project of the 2011 FEIR, incorporation of those mitigation measures summarized above reduced impacts on biological resources to less-than-significant levels.

Cumulative Impacts

The 2011 FEIR considered cumulative impacts to be significant if the potential exists for significantly compounding, aggravating, or otherwise significantly contributing to impacts when considering project-related impacts as well as those outside of the immediate Project Site. A cumulative impact may result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions. The 2011 FEIR analyzed growth-inducing impacts and those cumulative impacts related to known past, existing, and planned activities within a reasonable geographic region surrounding the Project Site. It was determined that the Casino Project in the 2011 FEIR would not result in significant cumulative impacts to biological resources after the inclusion of mitigation measures summarized above; therefore no additional mitigation measures for cumulative impacts were identified.

4.3.4.2 Changes Since the 2011 FEIR

Changes since the 2011 FEIR include changes in regulations affecting biological resources and new information regarding species observed on the Project Site. These are discussed in detail in this section.

Habitat Types

A supplemental Habitat Assessment was completed on the Project Site and is included within **Appendix P**. This Assessment identified areas of significant native grasses within annual grasslands. These identified areas were classified as coastal terrace prairie. Therefore, this Draft SEIR considers coastal terrace prairie as a habitat type separate from annual grasslands. The acreages and impacts presented and analyzed herein reflect inclusion of coastal terrace prairie grasslands as a habitat type.

Based on 2019 biological surveys and the regulatory setting described in **Section 4.3.2**, there are no other significant changes to the habitat types, locations, and sensitivities as presented in the 2011 FEIR. Additionally, no new biological information regarding corridors, nursery sites, or other significant habitat changes have occurred since the 2011 FEIR.

Wetlands and Waters of the U.S.

An approved jurisdictional wetland delineation verified by USACE in March of 2009 identified 2.758 acres of wetlands, 4,925 linear feet of drainages, 0.378 acres of other waters, and 144.123 acres of traditionally navigable waters on the Project Site. Approved jurisdictional delineations expire after five years. Therefore, a re-delineation of those identified Wetlands and Waters of the U.S. was completed as they relate to the Modified Project and current regulations on the definition and jurisdictional nature of Wetlands and Waters of the U.S. The majority of features were present as described, with the exception of four small wetlands and 382 linear feet of drainage which were absent. Five additional wetlands were determined to be outside of the development footprint, and the remaining 31 features were present as previously described.

The re-delineation requires USACE verification that certain features observed on the Project Site in the 2009 USACE verification are no longer present or, if they are, whether they are jurisdictional. Those features that are present as previously described may or may not still be considered Wetlands or Waters of the U.S. and would also require USACE verification. Because the re-delineation requires agency consultation and verification, wetlands and waters believed to no longer occur on the Project Site have still been included within **Figures 4.3-1** and **4.3-2**, as well as in **Section 4.3.5**. Therefore, as a precaution and for the purposes of this Draft SEIR, wetlands and waters historically observed on the Project Site and verified by USACE in 2009 are identified in this impacts analysis as possible jurisdictional habitats.

Special-Status Species

Since the 2011 FEIR, the following species have been removed from consideration as special-status species with the potential to occur onsite: bent-flowered fiddleneck, Franciscan thistle, wooly-headed lessingia, Mount Diablo cottonwood, silver-haired bat, and hoary bat. Suitable serpentine soils and gravelly slopes for bent-flowered fiddleneck are not present on the Project Site. Franciscan thistle has also been removed from consideration due to distribution; the nearest occurrence is over 7 miles away on the opposite side of the Bay. Wooly-headed lessingia and Mount Diablo cottonwood are both CNPS rank 3 plants and are not State or federally listed at this time; these species have not been observed on the Project Site and, while suitable habitat does occur of these species, they are not considered special-status species requiring further analysis. Similarly, silver-haired bat and hoary bat are not State or federally listed species that require additional analysis for the Modified Project.

Updated species literature review and analysis also revealed four additional species with the potential to occur that were not included in the 2011 FEIR: white fairypoppy, white-tailed kite, saline clover, and green sea turtle. Additionally, the monarch butterfly was listed as a candidate species under the federal ESA in 2014. While this species was not returned by USFWS as potentially occurring on the Project Site, the updated General Plan includes monarch butterflies as a valuable and sensitive biological resource occurring throughout the City shoreline. A discussion and analysis has therefore been included for this species.

One special-status plant was observed on the Project Site during surveys conducted for the 2011 FEIR and the Modified Project: Suisun marsh aster. Since the 2011 FEIR, one additional location on the Project Site was identified for this species.

Local Regulations, Conservation Plans, and other Guiding Documents

Since the 2011 FEIR, the regulatory setting has changed in certain areas. Changes to Appendix G of the CEQA Guidelines occurred in 2018, however, the significance criteria for biological resources remained primarily unchanged. Additionally, the City adopted a new General Plan in 2012. While the majority of policies have been reorganized and rewritten compared to the previous General Plan, the content remains primarily the same, with policies addressing the management and preservation of biological and natural resources. However, additional content concerning the preservation of trees and the restoration of habitat, including noxious weed removal, has been added to the new General Plan. The City has also published an Urban Greening Master Plan and updates to the City tree removal permitting requirements have been made, as discussed in **Section 4.3.2**. No other known binding policies, plans, or ordinances have been adopted or modified since the 2011 FEIR.

4.3.5 IMPACTS

4.3.5.1 Thresholds of Significance

Consistent with Appendix G of the CEQA Guidelines, impacts associated with biological resources would be considered significant if the Modified Project would:

- have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS;
- have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations, or by the CDFW or USFWS;
- have a substantial adverse effect on State or federally protected wetlands as defined by Section 404 of the CWA (including but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption or other means;
- interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory corridors, or impede the use of native wildlife nursery sites;
- conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan.

In addition to those thresholds of significance described above, consideration was given to those issues of concern related to biological issues raised in scoping comments. The Contra Costa Mosquito and Vector Control District submitted a scoping comment letter inquiring about the Modified Project's potential to expose the public to disease vectors and to increase the potential mosquito or vector breeding habitat.

4.3.5.2 Method of Analysis

This section identifies impacts to biological resources that could occur from construction and operation of the Modified Project. Impacts to biological resources were analyzed based on an examination of the Project Site; a review of maps, photos, and site plans; and field studies, as outlined in **Section 4.3.3**. The site information and regulatory framework outlined in **Section 4.3.2**, as well as public comments, informed the analysis below. The analysis focuses on the manner in which development of the Modified Project could impact, or contribute to significant cumulative impacts to, biological resources on or near the Project Site under baseline conditions. Baseline conditions are defined for the purposes of the analysis in this section as physical conditions on or around the publication of the Notice of Preparation in July 2019.

This analysis assumes the highest level of impacts within individual lots and within the mixed-use space. Development of the mixed-use space into either commercial development or residential development would result in similar impacts to biological resources. Under each potential construction scenario, impacts related to those thresholds of significance presented in **Section 4.3.5.1** would be similar. There would be no significant difference in construction and operation impacts, habitat conversion, and impacts to special-status species. Because no significant difference in impacts would occur to biological resources as a result of commercial mixed-use space compared to residential mixed-use space, the analysis presented herein is appropriate for either circumstance. Where it was concluded that the Modified Project would exceed significance thresholds, mitigation measures have been identified to reduce impacts to less-than-significant levels.

Impacts as a result of the construction and implementation of the San Francisco Bay Trail (Bay Trail) are analyzed within the Bay Trail Initial Study/Mitigated Negative Declaration (IS/MND), which is incorporated by reference as described within **Section 1.4.4**. Construction and operation of the Modified Project would not result in conditions that would affect the analysis of biological resources presented within the Bay Trail IS/MND. Therefore, the analysis and mitigation measures presented within the Bay Trail IS/MND have been incorporated into the mitigation measures herein for those impacts to biological resources related to the construction and operation of the portion of the Bay Trail within the Project Site.

An analysis to relevant scoping comments has additionally been prepared as **Impact 4.3.7** below. While an analysis in response to scoping comments beyond the scope of the thresholds of significance within Appendix G of the CEQA Guidelines is not required, relevant scoping comments have been addressed for informational purposes and included under **Impact 4.3.7**.

4.3.5.3 Effects Found Not to be Significant Without Further Analysis

Review and comparison of the existing setting conditions and the Modified Project characteristics with the significance criteria clearly show that no impacts would be associated with the following criterion for the reasons stated below.

The portion of the Bay Trail extension project implemented by the Modified Project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat

conservation plan.

Development of the Bay Trail was evaluated in an IS/MND prepared by the EBRPD and incorporated by reference in **Section 1.4.4**. As determined by this document, there are no known Habitat Conservation Plans, Natural Community Conservation Plans, or other approved local, regional, or State habitat conservation plans that are relevant to the Bay Trail.

4.3.5.4 Project-Level Impacts

IMPACT 4.3.1	HAVE A SUBSTANTIAL ADVERSE EFFECT, EITHER DIRECTLY OR THROUGH HABITAT MODIFICATIONS, ON ANY SPECIES IDENTIFIED AS A CANDIDATE, SENSITIVE, OR SPECIAL-STATUS SPECIES IN LOCAL OR REGIONAL PLANS, POLICIES, OR REGULATIONS, OR BY CDFW OR USFWS.
Significance Before Mitigation	Potentially Significant
Mitigation Measures	Modified Project Mitigation: MM 4.3-1 through MM 4.3-10; MM 4.8-1- through MM 4.8-2; MM 4.10-1; MM 4.10-5 Bay Trail IS/MND Mitigation: BIO-1 through BIO-4
Significance After Mitigation	Less Than Significant
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

An impact to special-status species may be considered potentially significant if a project has the potential to result in the direct or indirect harm to a species or individuals of a species. Indirect impacts include loss of habitat, especially USFWS-designated critical habitat or NMFS-designated EFH. There is no USFWS-designated Critical Habitat on the Project Site. NMFS-designated EFH is present on the Project Site within the navigable waters; however, there is no EFH present within a Planning Area, grading area, or in areas planned for off-site improvements (NMFS, 2019a). EFH overlapping with the navigable waters and eelgrass bed on the Project Site occurs for the following species or management units (NMFS, 2020).

- Finfish management unit
- Coastal Pelagic Species management unit
- Groundfish
- Chinook Salmon
- Coho Salmon

Construction of the Modified Project**Special-Status Plants**

A total of 16 special-status plants were determined to have the potential to occur on the Project Site. Of these, Suisun marsh aster, a wetland obligate plant, was the only special-status plant observed during biological surveys for both the 2011 FEIR and the Modified Project during the 2019 surveys. There are no recovery plans or similarly guiding documents for Suisun marsh aster mitigation. The Modified Project Planning Areas and grading areas avoid both known locations of the Suisun marsh aster and provide a

50-foot setback from known locations in most areas (**Figure 4.3-2**). Therefore, take of the Suisun marsh aster would not occur as a result of Modified Project implementation. However, there is the potential for Suisun marsh aster to establish in other suitable habitat on the Project Site prior to construction activities that could result in a potentially significant impact. Implementation of **Mitigation Measures 4.3-1** and **4.3-2** would provide protection to the Suisun marsh aster – both known locations and any potential new locations - by requiring pre-construction surveys, establishing buffer requirements, and ensuring that construction in the vicinity of Suisun marsh aster is monitored by a qualified biologist. Implementation of **Mitigation Measure 4.3-3** would require construction worker environmental awareness training that would educate workers on the special-status plants observed onsite, and construction best management practices (BMP) to identify buffer zones and avoid potential impacts. These mitigation measures would reduce impacts to Suisun marsh aster to less-than-significant levels.

There is the potential for other special-status plants to establish in suitable habitat on the Project Site prior to construction activities. Should this occur in an area scheduled for development, removal of these plants would result in a significant impact. Implementation of **Mitigation Measure 4.3-2** would reduce impacts to any special-status plants with the potential to occur on the Project Site, including the Suisun marsh aster described above. Pre-construction surveys required in **Mitigation Measure 4.3-2** would identify special-status plants that may have established between the time of surveys for this Draft SEIR and groundbreaking. Identification of these plants would require the establishment of setbacks or initiate agency consultation where required for unavoidable impacts. This ensures that potentially occurring special-status plants receive protection in the event that pre-construction surveys result in observations of special-status plants not previously mapped. Implementation of **Mitigation Measure 4.3-2** would reduce impacts to special-status plants that become established in areas where they have not been identified to date to less-than-significant levels.

Implementation of **Mitigation Measures 4.3-1** through **4.3-3** would reduce impacts on special-status plants to a less-than-significant level.

Special-Status Wildlife

Fish

The offshore Bay waters within the Project Site provide suitable habitat for six fish species: green sturgeon, Coho salmon, steelhead (Central California Coast and Central Valley DPS), Chinook salmon (Central Valley Spring Run, Sacramento Valley Winter Run ESUs). Suitable habitat for these species is found only in the navigable waters of the Project Site. Because the Modified Project will not result in in-water construction, there will be no direct impacts to these species. However, stormwater runoff and other construction-related activities that may affect water quality in the Bay could pose an indirect impact to these species. **Mitigation Measures 4.8-1** and **4.8-2** presented within **Section 4.8** would reduce impacts to special-status fish species by ensuring the quality of water in the Bay. Implementation of a Stormwater Pollution Prevention Plan (SWPPP) as identified in **Mitigation Measure 4.8-1** would require construction BMPs throughout construction to avoid production of runoff with impaired quality. The SWPPP would additionally require final site stabilization prior to closeout such that bare soil and other potential runoff-impairing issues are addressed. Development of a Demolition and Containment Plan as identified in **Mitigation Measure 4.8-2** provides specifically for protection of Bay waters during pier rehabilitation. By avoiding direct impacts to special-status fish and mitigating for potential indirect impacts

to habitat through implementation of **Mitigation Measures 4.8-1** and **4.8-2**, the impacts of the Modified Project on special-status fish would be reduced to a less-than-significant level.

Reptiles

The Project Site provides suitable habitat for one special-status reptile, the green sea turtle. Suitable habitat for this species is found only in the navigable waters of the Project Site. Because the Modified Project will not result in in-water construction, there will be no direct impact to this species. However, stormwater runoff and other construction-related activities that may affect water quality in the Bay may pose an indirect impact to these species. **Mitigation Measures 4.8-1** and **4.8-2** presented within **Section 4.8** would reduce indirect impacts to special-status reptiles by ensuring water quality in the Bay. Implementation of a SWPPP as identified in **Mitigation Measure 4.8-1** would require construction BMPs throughout construction to avoid production of runoff with impaired quality. The SWPPP would additionally require final site stabilization prior to closeout such that bare soil and other potential runoff-impairing issues are addressed. Development of a Demolition and Containment Plan as identified in **Mitigation Measure 4.8-2** provides specifically for protection of Bay waters during pier rehabilitation.

Additionally, green sea turtles may rely on eelgrass beds found within the Project Site as a food source. Impacts to eelgrass beds would therefore constitute a potentially significant impact to this species. Implementation of **Mitigation Measure 4.3-4** would reduce impacts to green sea turtles by restricting water vessel routes near eelgrass beds and prohibiting activities that would degrade the quality of eelgrass bed habitat. By avoiding direct impacts to special-status reptiles and mitigating potential impacts to habitat and important food sources through implementation of **Mitigation Measures 4.8-1** and **4.8-2**, and **Mitigation Measure 4.3-4**, the impacts of the Modified Project on special-status reptiles would be reduced to a less-than-significant level.

Birds

The Project Site provides suitable nesting and foraging habitat for multiple ground and tree nesting special-status bird species described in **Section 4.3.3.4**, as well as nesting and foraging habitat for migratory birds protected under the MBTA. Avoidance of tidal marsh, navigable waters, and beach strand habitat and minimization of impacts to wetlands significantly reduces potential impacts to the western snowy plover, California black rail, salt marsh yellowthroat, Alameda song sparrow, San Pablo song sparrow, double-crested cormorant, Ridgway's rail, and California least tern by avoiding the nesting habitat for these species. Impacts to other potentially occurring nesting birds that rely on tidal marsh, beach strand, and the navigable waters present on the Project Site for nesting or foraging are similarly reduced by avoidance of these habitat types. As discussed within **Section 3.4.1**, final development plans would be restricted to a total maximum development of 30 percent of the above-water area of the Project Site (approximately 82.74 acres). Therefore, a total of at least 70 percent of the terrestrial habitat on the Project Site would not be developed as part of the Modified Project.

Nest disturbance from construction noise or other activities has the potential to result in abandonment or destruction of nests. This is considered a potentially significant impact. **Mitigation Measure 4.3-5** would reduce impacts to special-status birds and their nests by requiring pre-construction surveys to identify active nests within and in the vicinity of groundbreaking activities and the implementation of buffers determined by a qualified biologist with incorporation of the appropriate agency guidance and/or

consultation to ensure that buffers are of an appropriate size to reduce impacts. **Mitigation Measure 4.10-1** describes noise-reducing practices consistent with acceptable noise levels in the City that would additionally reduce disturbance to wildlife from noise produced by construction activities. Identification of active nests and establishment of suitable buffers accounting for anticipated levels of construction disturbance protects against accidental nest destruction and reduces the likelihood that disturbance levels would result in nest abandonment. Implementation of **Mitigation Measures 4.3-5** and **4.10-1** would reduce impacts to nesting birds to a less-than-significant level.

Construction-phase use of artificial lighting has the potential to strand shorebirds or migratory birds. Artificial lighting has the potential to act as an attractant and can lead to altered behavior resulting in stranding, injury, or mortality. Activities altering the normal behavior of special-status birds resulting in these adverse impacts are considered potentially significant. **Mitigation Measure 4.3-6** would reduce these impacts. This is achieved through the reduction of potentially attractive lighting and minimization of lighting spillage, especially into areas of sensitive habitat, and the identified implementation of a nighttime lighting plan with incorporation of Dark Skies Initiatives recommendations. Implementation of **Mitigation Measure 4.3-6** would reduce potential impacts to special-status birds associated with the risks of artificial lighting to a less-than-significant level.

While avian predators naturally occur on the Project Site, construction and operational activities have the potential to attract predators such as raccoons, skunks, and feral cats through discarded litter and food. An increase in avian mortality and disturbance due to an artificially high predator presence would be considered a significant impact. **Mitigation Measure 4.3-7** would require limiting the man-made wildlife attractants on the Project Site through proper trash collection and removal to reduce disturbance and predation on birds. Additionally, **Mitigation Measure 4.3-3** would require Environmental Awareness Training to educate construction personnel educated on minimizing impacts to special-status birds. Implementation of **Mitigation Measures 4.3-3, 4.3-5 through 4.3-7, and 4.10-1**, presented within **Section 4.10**, would reduce the Modified Project's impacts to special-status birds to a less-than-significant level.

Mammals

The Project Site contains suitable habitat for two special-status mammals: pallid bat and Townsend's big-eared bat. The Modified Project would preserve the majority of the Project Site in open space and concentrate development within previously disturbed areas, minimizing loss of foraging habitat. Roost disturbance, especially maternal roost, and direct injury or mortality due to construction would be considered significant. These impacts have the potential to occur during the construction phase should any active roost trees or buildings be removed or modified. Implementation of **Mitigation Measure 4.3-8** would minimize disturbance and prevent direct impacts through requirements to conduct pre-construction surveys. These surveys would identify active bat habitat and require a qualified bat biologist to facilitate the evacuation of bats from structures. **Mitigation Measure 4.3-3** would require Environmental Awareness Training to educate construction personnel educated on minimizing impacts to special-status bats. By identifying active bat habitat in pre-construction surveys and facilitating the evacuation of bats through a qualified bat biologist, implementation of **Mitigation Measures 4.3-3** and **4.3-8** would prevent direct mortality and reduce disturbance. Impacts to special-status bats would be reduced to less-than-significant levels.

Invasive Species and Disease Vectors

Increased human activity and use of equipment traveling on and off the Project Site have the potential to introduce invasive species or pathogens to the Project Site. Increased human activity on the Project Site increases the potential that invasive seeds are transferred by vehicles, pathogens are carried on clothing, and other unintended consequences could impact biological resources on the Project Site. Unintended human transfer of disease, disease vectors, and invasive species is considered a risk to native plant and wildlife species. The spread of seed from invasive plants or noxious pathogens harmful to native species is a potentially significant impact. **Mitigation Measures 4.3-3** and **4.3-10** would minimize these impacts. Education of construction personnel on the sensitive nature of biological resources, and proper training on equipment management would reduce the risk that invasive species or pathogens with the potential to negatively impacts special-status species would be inadvertently introduced to the Project Site. Through conscious maintenance of equipment and education of construction staff on the importance of preserving sensitive biological resources, the potential for introducing invasive species to the Project Site would be minimized in the construction phase. Incorporation of **Mitigation Measures 4.3-3** and **4.3-10** would reduce these impacts to a less-than-significant level.

Summary

Incorporation of **Mitigation Measures 4.3-1** through **4.3-8** as well as **Mitigation Measures 4.8-1** and **4.8-2**, **Mitigation Measure 4.10-1**, and **Mitigation Measures BIO-1** through **BIO-4** consistent with the Bay Trail IS/MND, would reduce **Impact 4.3.1** as it relates to construction of the Modified Project to less-than-significant levels.

Operation of the Modified Project

Special-Status Plants

Operation of the Modified Project would not result in additional habitat conversion or modification that could result in the removal of special-status plants or their habitat. However, increased human traffic on the Project Site has the potential to degrade the quality of habitat that is not impacted during the construction phase. Increased human presence has the potential to result in higher levels of litter, pollution, and habitat disturbance that may degrade the quality a habitat suitable for special-status plants. This is a potentially-significant impact. Incorporation of **Mitigation Measure 4.3-9** would require public signage educating visitors and residents on the presence and importance of sensitive habitat as well as appropriate actions to reduce impacts to these habitats. Provisions that require routine maintenance of public-access infrastructure and litter removal would further reduce impacts. With incorporation of **Mitigation Measure 4.3-9**, operational impacts of the Modified Project on special-status plants would be less than significant.

Special-Status Wildlife

Degradation of Habitat

The majority of potential impacts to special-status wildlife are anticipated in the construction phase through habitat conversion and construction disturbance. Operation of the Modified Project would not result in ongoing habitat conversion that would result in the loss of habitat for special-status wildlife. As discussed in **Section 4.8.5**, with the incorporation of Modified Project design features such as treatment ponds and other low-impact development (LID) features, stormwater outfall energy dissipaters, and

wastewater treatment, operation of the Modified Project would not violate any water quality standards or water discharge requirements (WDR) or otherwise substantially degrade surface or groundwater quality.

However, as described under operational impacts to special-status plants, increased human traffic on the Project Site has the potential to degrade the quality of habitat that is not impacted during the construction phase. Impacts that degrade the quality of habitat that may support special-status species would be potentially significant. As discussed under special-status plants, incorporation of **Mitigation Measure 4.3-9** would require public signage educating visitors and residents on the presence and importance of sensitive habitat as well as appropriate actions to reduce impacts to these habitats. Provisions that require routine maintenance of public-access infrastructure and litter removal would further reduce impacts. Under **Mitigation Measure 4.3-4**, eelgrass monitoring would be required for three years following rehabilitation and use of the pier. Annual reports would be sent to NMFS for evaluation. Implementation of an eelgrass mitigation plan approved by NMFS in the event that pier use is determined to adversely affect eelgrass would reduce impacts. With incorporation of **Mitigation Measures 4.3-9** and **4.3-4**, operational impacts of the Modified Project on special-status plants are less than significant.

Sensory Disturbance – Noise

The Modified Project would result in ongoing operational noise in excess of baseline levels. In general, those special-status wildlife species sensitive to noise production (nesting birds, special-status bats) are anticipated to utilize habitat outside of those areas converted into developed or otherwise disturbed habitat. Operational use of the Project Site would consist of residences and commercial development. These uses are not typically associated with production of extreme noise events, ground-borne noise vibrations, or ongoing use of disruptive heavy equipment. These ongoing activities would additionally be subject to restrictions on noise production consistent with the General Plan and RMC. Under these restrictions, noise production during the peak hours of bat activity would be limited. Ongoing operations would similarly present minimal disturbance to nesting birds as extreme noise disruption from heavy equipment or ground-borne vibration would not occur. In analyzing the anticipated noise production of Modified Project operations, it was determined that the proposed on-site sanitary sewer treatment facility under Wastewater Treatment Variant A has the potential to produce significant noise exceeding acceptable noise levels (See **Section 4.10.5**). Therefore, implementation of **Mitigation Measure 4.10-5** as presented within **Section 4.10** would be necessary to reduce impacts to special-status species from noise disturbance associated with operation of the Modified Project. **Mitigation Measure 4.10-5** would require that Modified Project facilities exceeding acceptable noise production thresholds be bounded by solid noise barriers such that noise-production thresholds are not exceeded. Construction of sound barriers around those facility features with the potential to produce high levels of noise would reduce operation impacts to special-status wildlife related to noise production to a less-than-significant level.

Sensory Disturbance – Lighting

The Modified Project would result in ongoing operational use of artificial lighting. As described for construction of the Modified Project, use of artificial lighting has the potential to significantly impact special-status birds and reptiles. Because ongoing use of artificial lighting has the potential to impact special-status species in the same manner as construction of the Modified Project, those mitigation measures necessary for construction of the Modified Project are identified for operation of the Modified Project. **Mitigation Measure 4.3-6** would require a City-approved nighttime lighting plan consistent with

City lighting regulations and Dark Skies recommendations. This would prohibit uplighting consistent with the City's Bird-Safe building code specifically. While the majority of new structures would not be subject to the Bird-Safe Building Code, those that would result in a significant glass façade as defined in § 15.04.608.030 would be required to comply with glass frosting measures. With implementation of this mitigation measure, and compliance with the Bird-Safe Building Code, operational impacts to special-status species as they relate to operational use of artificial lighting would be less than significant.

Invasive Species and Disease Vectors

Increased human activity traveling on and off the Project Site has the potential to introduce invasive species to the Project Site. This may include the spread of seed from invasive plants, or non-native noxious pathogens harmful to native species resulting in a potentially significant impact. Spread of invasive species and disease vectors may originate from the following sources, amongst others: use of recreational beach and ocean equipment used offsite and not cleaned before use onsite; hitchhiking seeds or other organisms caught on hiking boots, clothes, or other gear from off-site locations; and planting of ornamental landscaping. Implementation of **Mitigation Measure 4.3-9** would require educating residents and visitors on the sensitive nature of biological resources and the proper management of gear used onsite and offsite. This would reduce the risk that invasive species or pathogens with the potential to negatively impact special-status species would be inadvertently introduced to the Project Site and would reduce the impact to a less-than-significant level.

Summary

Incorporation of **Mitigation Measures 4.3-4, 4.3-6, and 4.3-9** as well as **Mitigation Measure 4.10-5** would reduce **Impact 4.3.1** as it relates to operation of the Modified Project to less-than-significant levels.

Construction of Off-Site Improvement Areas

Construction of the off-site improvement areas involves roadway widening and utilities improvements. This work would take place within existing roadways or utility right-of-ways within developed or disturbed habitat. The proposed wastewater pipeline would be undergrounded within existing roadway with some aboveground routing through the paved and fenced Chevron® property. These habitat types provide little value to special-status wildlife species and do not include habitat to support regionally occurring special-status species.

However, similar to construction of the Modified Project, construction of off-site improvements occurs in the vicinity of suitable nesting bird habitat. Disturbance of nesting birds would be considered a significant impact. Implementation of the mitigation measures identified for the construction of the Modified Project would apply to impacts from construction of off-site improvement areas. Therefore, implementation of **Mitigation Measures 4.3-5 through 4.3-7** would reduce **Impact 4.3.1** as it relates to construction of the off-site improvements to less-than-significant levels.

Operation of the Off-Site Improvement Areas

Off-Site improvement areas are comprised of roadway widening and utilities infrastructure. Use of existing roadways, pipelines, and similar utilities following the construction of the Modified Project would not result in direct impacts to special-status species, the conversion of habitat types capable of supporting

special-status species, or impacts to the quality of these habitat types. As discussed in **Section 4.8.5**, with the incorporation of Modified Project design features such as treatment ponds and other LID features, stormwater outfall energy dissipaters, and wastewater treatment, operation of the Modified Project would not violate any water quality standards or WDRs or otherwise substantially degrade surface or groundwater quality. Operation of these features would therefore not result in impacts to biological resources and would not require mitigation. No impact would occur.

Construction of the Bay Trail

Impacts as a result of the construction and implementation of the Bay Trail are analyzed within the Bay Trail IS/MND, which is incorporated by reference, as described within **Section 1.4.4**. The Bay Trail IS/MND determined that construction of the Bay Trail has the potential to significantly impact special-status plants through potential take, special-status nesting birds through nest disturbance, and monarch butterflies through removal of active overwintering roost trees. These impacts were determined to require mitigation to reduce impacts to less-than-significant levels. No significant loss of habitat was identified as the Bay Trail would include the construction of a new paved trail located in the footprint of the existing railroad alignment. This would require an insignificant amount of grading, vegetation removal, soils disturbance, and paving. The Bay Trail IS/MND identified **Mitigation Measures BIO-1, BIO-2, BIO-3, and BIO-4**, described in **Section 4.3.6**, which would reduce the impacts to less-than-significant levels by conducting surveys prior to construction to identify locations and determine avoidance of special-status plant species, bird nests during bird nesting season, California Ridgway's (formally Clapper) rail and California black rail, as well as monarch butterflies during the winter roosting season. With implementation of **Mitigation Measures BIO-1, BIO-2, BIO-3, and BIO-4**, impacts related to construction of the Bay Trail on special-status species would be less than significant.

Operation of the Bay Trail

The Bay Trail IS/MND determined that operation of the Bay Trail would generate noise and other disturbance as a result of foot and bike traffic, and would potentially generate litter that could attract feral cats and dogs and thus impact wildlife. These potential impacts were determined represent a less-than-significant impact to special-status species, and no additional mitigation measures were included in the IS/MND.

IMPACT 4.3.2	HAVE A SUBSTANTIAL ADVERSE EFFECT ON ANY RIPARIAN HABITAT OR OTHER SENSITIVE NATURAL COMMUNITY IDENTIFIED IN LOCAL OR REGIONAL PLANS, POLICIES, AND REGULATIONS, OR BY THE CDFW OR USFWS
Significance Before Mitigation	Significant
Mitigation Measures	Modified Project Mitigation: MM 4.3-4; MM 4.3-6; MM 4.3-9; MM 4.3-11 through 4.3-18; MM 4.8-1; MM 4.8-2 Bay Trail IS/MND Mitigation: BIO-5 and BIO-6
Significance After Mitigation	Less Than Significant
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

An impact on a sensitive natural community would be considered significant or substantial if sensitive habitat types were directly converted, disturbed through the process of construction and maintenance of a project, or indirectly disturbed by construction or ongoing activity associated with a project. Indirect impacts may occur due to narrow buffers from development, connectivity of resources such as groundwater, non-discrete impacts such as pollution, and other project-related impacts.

Construction of the Modified Project

A summary table showing habitat acreage within Planning Areas and grading areas of the Modified Project is included as **Table 4.3-3**. The potential habitat impacts from the Modified Project are also illustrated in **Figure 4.3-2**, which depicts Planning Area and grading area impacts as well as the development of the Bay Trail through the Project Site. **Table 4.3-3** provides a complete breakdown of habitat types within proposed Planning Areas. It is understood that final lot line alignment would not result in full development of these areas, but the portions of the Planning Areas that would be affected is not known at this time. For this reason, impacts analyzed here assume all of the habitat in the potential Planning Areas would be affected, which results in this analysis identifying the maximum possible impacts to those biological resources.

TABLE 4.3-3
SUMMARY OF PROJECT IMPACTS BY HABITAT TYPE

Habitat Type	Acres Within Planning Areas	Area Within Grading Areas
Terrestrial		
Ruderal/Developed	57.5	6.4
Annual Grassland	15.5	3.7
Coastal Terrace Prairie Grassland	3.8	0.7
Coastal Scrub	16.8	8.8
Invasive Scrub	7.4	5.7
Mixed Riparian	0.5	0.2
Eucalyptus Woodland	17.4	6.5
Beach Strand	0	0.02
Aquatic		
Navigable Waters	0	0
Eelgrass Bed	0	0
Seasonal Wetland	0.9	0.4
Ephemeral Drainage	0.2 (650.4 linear feet)	0.1 (233.4 linear feet)
Tidal Marsh	0	0
Total Impact Area	120.0	32.5

The following habitat types are considered sensitive and would constitute a significant impact if affected by the Modified Project: coastal terrace prairie grassland, coastal scrub, mixed riparian, beach strand, eelgrass bed, seasonal wetland, and tidal marsh. As discussed under **Impact 4.3.1**, no Critical Habitat or

EFH exists within a Planning Area, grading area, or off-site impact area. The specific impacts of Modified Project construction on sensitive habitat types are discussed below.

Coastal Scrub

Coastal scrub habitat is a native and sensitive community scattered throughout the Project Site as defined in *A Guide to Wildlife Habitats of California* (Mayer and Laudenslayer, 1988). This habitat is currently intermixed with invasive scrub that is becoming the dominant species over time and will continue to do so if left unmanaged. Of a total 58.2 acres of coastal scrub, 16.8 acres (28.8 percent) are within a Planning Area. An additional 8.8 acres (15.2 percent) of coastal scrub may be impacted through the grading phase of development but is scheduled to be within open space following construction. Due to restriction on overall development to a maximum 30 percent of terrestrial habitat, it is likely that not all coastal scrub within a Planning Area or grading area would be permanently converted. Although 56.0 percent of this habitat type is outside of a Planning Area or grading area and would not be permanently converted, the potential permanent loss and disturbance throughout grading of coastal scrub within a Planning Area or grading area would be a significant impact.

There are no known recovery plans, mitigation guidelines, local policies, or other provisional documents with a set precedence of standards for mitigating impacts to coastal scrub. The 2011 FEIR defined a 2:1 mitigation ratio for impacts to coastal scrub. **Mitigation Measure 4.3-11** requires a 1.5:1 ratio, with mitigation in the form of in-kind habitat preservation, creation, or restoration included as acceptable methods of mitigation. Preservation, restoration, and creation of in-kind habitat types serves to preserve or replace those ecosystem services lost by the conversion of habitat. Under **Mitigation Measure 4.3-11**, the balance of coastal scrub outside of Planning Areas and grading areas would be preserved and managed in the long term. Additionally, this mitigation would require removal of all invasive scrub habitat within the Open Space area with long-term management to prevent re-establishment of invasive scrub. Additional re-planting of coastal scrub impacted in grading areas, and replacement of invasive scrub impacted in grading areas with coastal scrub would occur under **Mitigation Measure 4.3-11**. Due to the requirement for the complete removal of invasive scrub, and restoration activities identified in preservation areas, including success criteria and adaptive management requirements, a mitigation ratio of 1.5:1 is appropriate for the Modified Project. Under the 2011 FEIR, while a higher 2:1 mitigation ratio was included, there were no requirements for ongoing restoration activities within preservation areas, and there was no requirement for complete removal of invasive scrub. Therefore, a ratio of 1.5:1, requiring a minimum 1.5 acres of in-kind habitat to be created, restored, or preserved for every acre impacted, providing additional assurances that direct impacts to those acres not practical to avoid through Modified Project design are fully mitigated for. Further, removal of the invasive scrub would remove a significant threat to native species including coastal scrub.

The Modified Project would result in a portion of the Project Site held by private landowners, with the balance retained by the City. In order to address the management of biological resources and mitigation for impacts to sensitive habitats under both landowner situations, an Open Space Plan and vegetation management standards are included as **Mitigation Measures 4.3-12** and **4.3-13**, respectively. The Open Space Plan would cover those areas of the Project Site retained by the City, which is predominantly open space that would remain as a park-like space, while the vegetation management standards would apply to those areas held privately and subject to various development activities. Land to be retained in

ownership by the City is shown in **Figure 3-10** as those outside of the development areas. **Mitigation Measure 4.3-12** would identify incorporation of habitat mitigation within the Open Space Plan to ensure that compensatory actions required for impacts to coastal scrub habitat are implemented and monitored as necessary in order to meet success criteria and reduce impacts to coastal scrub habitat to a less-than-significant level.

Mixed Riparian

Mixed riparian habitat occurs along the existing drainage features. Several of these drainage features are manmade and have been predominately channelized into linear features. A total of 0.5 acres (13.2 percent) of mixed riparian habitat on the Project Site falls within a Planning Area. An additional 0.2 acres (5.3 percent) of mixed riparian habitat would be impacted during the grading process but retained within open space following construction. Due to restriction on overall development to a maximum of 30 percent of terrestrial habitat, it is likely that not all mixed riparian habitat within a Planning Area or grading area would be permanently converted. Although 81.6 percent of this habitat type is outside of a Planning Area or grading area and would not be permanently converted, the potential permanent loss and disturbance of mixed riparian habitat within a Planning Area or grading area would be a significant impact.

As noted in **Section 4.3.3.2**, conversion of mixed riparian habitat may require notification to CDFW and CDFW determination on whether the Modified Project would require an LSAA permit as described in **Section 4.3.2.2**. Riparian habitat and associated ephemeral drainages fall within the Planning Area and grading area. Impacting riparian habitat such that the bed, bank, and flow of these drainages are altered would require CDFW notification of the Modified Project. Additional impacts to ephemeral drainages discussed below would also require CDFW notification and would likely require an LSAA permit.

Implementation of **Mitigation Measure 4.3-14** would require avoidance of riparian habitat where feasible and setbacks of at least 50 feet around riparian habitats not impacted by development. Unavoidable impacts would require mitigation at a 2:1 ratio through preservation, restoration, enhancement, or creation of mixed riparian habitat. In addition, for mixed riparian habitat areas not avoided, **Mitigation Measure 4.3-14** requires compliance with CDFW LSAA terms where a permit is identified, and sets minimum mitigation standards. There are no known recovery plans, mitigation guidelines, local policies, or other provisional documents with a set precedence of standards for mitigating impacts to mixed riparian habitat. By providing setbacks around un-impacted riparian habitat and compensatory mitigation compliant with necessary permit terms, implementation of **Mitigation Measure 4.3-14** would reduce impacts to mixed riparian habitat to a less-than-significant level.

Beach Strand

Beach strand is not within a Planning Area of the Modified Project. However, 0.02 acres of this habitat type are within a potential grading area. Given the unique and sensitive nature of this habitat type, **Mitigation Measure 4.3-15** requires complete avoidance of direct impacts. In addition, implementation of **Mitigation Measure 4.3-15** would reduce impacts from ground disturbance through a requirement to use existing or proposed roadways and establishing construction setbacks.

Stormwater outlets and other runoff may occur within the vicinity of this habitat type. Because beach strand is considered a sensitive habitat, water quality of runoff may pose a significant impact to this

habitat. Implementation of **Mitigation Measures 4.8-1** and **4.8-2** presented within **Section 4.8** would reduce impacts related to water quality through implementation of a SWPPP that would require BMPs throughout construction to avoid production of runoff with impaired quality. The SWPPP would additionally require final site stabilization prior to closeout such that bare soil and other potential runoff-impairing issues are addressed. Development of a Demolition and Containment Plan provides specifically for protection of Bay waters adjacent to beach strand habitat during pier rehabilitation. Implementation of **Mitigation Measures 4.8-1** and **4.8-2** and **Mitigation Measure 4.3-15** would prevent indirect impacts to beach strand habitat and would reduce impacts on this habitat type to a less-than-significant level.

Eelgrass Beds

Eelgrass beds would not be directly removed as a result of the Modified Project. However, due to its sensitive nature, indirect impacts associated with the Modified Project are also considered significant to this habitat type. Eelgrass serves to moderate ocean pH, and provides necessary forage and habitat for wildlife amongst other important ecosystem services. Impacts to eelgrass from use of the pier or from runoff generated by the Modified Project would be considered significant. Potential impacts may result from water quality of runoff causing increased turbidity and pollution load. **Mitigation Measures 4.8-1** and **4.8-2** presented within **Section 4.8**, and compliance with the Construction General Permit would reduce indirect impacts to eelgrass by ensuring water quality in the Bay. Implementation of a SWPPP would require BMPs throughout construction to avoid production of runoff with impaired quality. The SWPPP would also require final site stabilization prior to closeout such that bare soil and other potential runoff-impairing issues are addressed. Development of a Demolition and Containment Plan provides specifically for protection of Bay waters during pier rehabilitation. **Mitigation Measure 4.3-4** would provide additional protections to sensitive eelgrass habitat by restricting acceptable activities in the vicinity of eelgrass beds and requiring monitoring in consultation with the NMFS during the pier rehabilitation and initial use, as well as adherence to necessary BCDC permit conditions.

Because artificial lighting associated with construction and operational activities has the potential to impact wildlife behavior within the eelgrass and therefore the eelgrass itself, **Mitigation Measure 4.3-6** would require the inclusion of lighting-minimization on eelgrass bed habitat within the nighttime lighting plan. Implementation of **Mitigation Measures 4.8-1** and **4.8-2**, and **Mitigation Measures 4.3-4** and **4.3-6**, would reduce impacts to eelgrass beds to less-than-significant levels.

Seasonal Wetland and Ephemeral Drainages

Seasonal wetlands and ephemeral drainages are considered sensitive habitat types. Ephemeral drainages on the Project Site are manmade and channelized. These habitat types are potentially subject to USACE and/or RWQCB jurisdiction as discussed under **Impact 4.3.3**. Impacts to ephemeral drainages that impact the bed, bank, or flow of these features would require project notification to the CDFW Lake or Streambed Alteration Program. CDFW would likely require acquisition of an LSAA for fill or alteration of ephemeral drainages. A discussion on impacts to State or federal wetlands and waters is provided below under **Impact 4.3.3**. Impacts to seasonal wetlands and ephemeral drainages requiring a USACE CWA Section 404 permit and RWQCB CWA Section 401 certification, or RWQCB Waste Discharge Requirements typically require mitigation at a ratio greater than 1:1 based upon a mitigation checklist that has been developed by the USACE South Pacific Division. Implementation of **Mitigation Measure 4.3-16**

would result in mitigation to seasonal wetland and ephemeral drainages to occur at a 3:1 ratio of impacts to preservation, restoration, and/or creation of habitat. While the USACE and RWQCB CWA Section 404 and 401 permits would require mitigation to reduce impacts to jurisdictional wetlands or waters to less-than-significant levels, additional requirements in **Mitigation Measure 4.3-16** for seasonal wetland or ephemeral drainages, along with permitting by the USACE and RWQCB would reduce impacts to seasonal wetland or ephemeral drainages to less-than-significant levels.

Tidal Marsh

Tidal marsh habitat is not within a Planning Area or grading area of the Modified Project. However, this habitat type may be indirectly impacted should the Modified Project result in impaired water runoff or disturbance from use of equipment adjacent to this habitat type due to its extremely sensitive and biologically valuable nature. **Mitigation Measure 4.3-17** would provide protections to tidal marsh habitat in the form of setbacks and fencing. Appropriate setbacks and construction monitoring would prevent construction activities from encroaching on tidal marsh and potentially causing impacts to this habitat type. **Mitigation Measures 4.8-1** and **4.8-2** presented within **Section 4.8** would prevent indirect impacts related to water quality of runoff and would reduce impacts to tidal marsh habitat by implementing a SWPPP, which would require BMPs throughout construction to avoid production of runoff with impaired quality. The SWPPP would additionally require final site stabilization prior to closeout such that bare soil and other potential runoff-impairing issues are addressed. Implementation of **Mitigation Measures 4.3-17**, **4.8-1**, and **4.8-2**, would reduce impacts to tidal marsh habitat to a less-than-significant level.

Coastal Terrace Prairie

While the majority of grasslands on the Project Site are dominated by non-native species, native coastal grasses were observed interspersed with non-native grasses. A Supplemental Habitat Assessment was completed to identify those areas of annual grasslands with high percentages of native grasses, which were determined to be best classified as coastal terrace prairie (**Appendix P**). A total of 3.8 acres (35.5 percent) of coastal terrace prairie occurs within a Planning Area, with an additional 0.7 acres (6.5 percent) within a grading area. Due to restriction on overall development to a maximum 30 percent of terrestrial habitat, it is likely that not all coastal terrace prairie habitat within a Planning Area or grading area would be permanently converted. Although 57.9 percent of this habitat type is outside of a Planning Area or grading area and would not be permanently converted, the potential permanent loss and disturbance of coastal terrace prairie within a Planning Area or grading area would be a significant impact.

There are no known recovery plans, mitigation guidelines, local policies, or other provisional documents with a set precedence of standards for mitigating impacts to coastal terrace prairie, and a precedence was not formally determined by the 2011 FEIR. The Supplemental Habitat Assessment identified those areas suitable for preservation and restoration of biologically significant habitat, including coastal terrace prairie (**Appendix P**). **Mitigation Measure 4.3-18** identifies a mitigation ratio of 2:1, with mitigation in the form of in-kind habitat preservation, creation, or restoration included as acceptable methods of mitigation. Preservation, restoration, and creation of in-kind habitat types serves to preserve or replace those ecosystem services lost by the conversion of habitat and would target those areas identified in the Supplemental Habitat Assessment as candidate locations for preservation or restoration. Additional re-planting of native grasses impacted in grading areas, and replacement of invasive grasses impacted in

grading areas with native grasses would occur under **Mitigation Measure 4.3-18**. A ratio of 2:1, requiring two acres of in-kind habitat to be created, restored, or preserved for every acre impacted, provides additional assurances that direct impacts to those acres not practical to avoid through project design are fully mitigated.

The Modified Project would result in a portion of the Project Site held by private landowners, with the balance retained by the City. In order to address the management of biological resources and mitigation for impacts to sensitive habitats under both landowner situations, an Open Space Plan and vegetation management standards are included as **Mitigation Measures 4.3-12** and **4.3-13**, respectively. The Open Space Plan would cover those areas of the Project Site retained by the City, which is predominantly open space that would remain as a park-like space, while the vegetation management standards would apply to those areas held privately and subject to various development activities. Land to be retained in ownership by the City is shown in **Figure 3-10** as “Open Space” and “Public Services,” with all other land to be held privately. **Mitigation Measure 4.3-12** would require incorporation of habitat mitigation within the Open Space Plan to ensure that compensatory actions required for impacts to coastal terrace prairie habitat are implemented and monitored as necessary in order to meet success criteria such that a 2:1 acre ratio is achieved through preservation and/or creation, enhancement, and restoration. Preservation activities would require monitoring and management to ensure encroachment of non-native annual grasses is managed. Restoration and creation activities would be monitored and managed such that percent native grass cover meets or exceeds that of un-impacted coastal terrace prairie. Through a 2:1 mitigation ratio and minimum success criteria, impacts to coastal terrace prairie habitat would be reduced to a less-than-significant level.

Summary

Incorporation of **Mitigation Measures 4.3-4, 4.3-6, 4.3-11** through **4.3-18** as well as **Mitigation Measures 4.8-1** and **4.8-2** would reduce **Impact 4.3.2** as it relates to construction of the Modified Project to a less-than-significant level.

Operation of the Modified Project

Operation of the Modified Project would not result in additional habitat conversion or modification that could result in direct impacts to sensitive habitat beyond those that would occur during construction. However, increased human traffic on the Project Site has the potential to degrade the quality of habitat that is not impacted during the construction phase. A majority of the area between the Bay Trail and navigable waters is comprised of ruderal/disturbed habitat. However, sensitive beach strand habitat and tidal marsh habitat also occur in this area. Consistent with the General Plan, the Modified Project would result in full public access to shoreline areas, including the shoreline park described in **Section 3.4.2**. This access would result in increased human use of the shoreline areas and open space. Increased human presence has the potential to result in higher levels of litter, pollution, and habitat disturbance that may degrade the quality of sensitive habitats onsite. This is a potentially significant impact. **Mitigation Measure 4.3-9** would require public signage educating visitors and residents on the presence and importance of sensitive habitat as well as appropriate actions to reduce impacts to these habitats. Provisions that require routine maintenance of public-access infrastructure and litter removal would further reduce impacts.

As discussed in **Section 4.8.5**, with the incorporation of project design features such as treatment ponds and other LID features, stormwater outfall energy dissipaters, and wastewater treatment, operation of the Modified Project would not violate any water quality standards or WDRs or otherwise substantially degrade surface or groundwater quality. Operation of the Modified Project would therefore have a less-than-significant impact on sensitive habitat types related to the quality of operational runoff and discharge.

Additional protections specifically for eelgrass are included in **Mitigation Measure 4.3-4**. This would limit acceptable recreational activities in the vicinity of eelgrass and would require vessels utilizing the pier to follow a designated path away from eelgrass bed habitat. Monitoring would be submitted to NMFS for three years following pier rehabilitation and use and would ensure that indirect impacts, should they occur, are identified. Any operational indirect effects to eelgrass observed during annual monitoring would be offset through an eelgrass mitigation plan approved by NMFS. Implementation of **Mitigation Measures 4.3-4** and **4.3-9** would reduce the operational impacts of the Modified Project on sensitive habitat types to less-than-significant levels.

Construction of Off-Site Improvement Areas

Construction of the off-site improvement areas involves roadway widening and utilities improvements, primarily within existing roadways or utility right-of-ways within developed or disturbed habitat. However, these activities occur near sensitive habitat types and Bay waters and may therefore degrade the quality of these habitat types through production of impaired stormwater runoff. Similar to the analysis for the Modified Project, these impacts would be considered significant. Implementation of the mitigation measures identified for the construction of the Modified Project would apply to impacts from construction of off-site improvement areas. Therefore, **Mitigation Measures 4.8-1** and **4.8-2** presented within **Section 4.8** would reduce impacts to sensitive habitat types through implementation of a SWPPP that would require BMPs throughout construction to avoid production of runoff with impaired quality. The SWPPP would also require final site stabilization prior to closeout such that bare soil and other potential runoff-impairing issues are addressed. Implementation of **Mitigation Measures 4.8-1** and **4.8-2** would reduce impacts to sensitive habitat types resulting from construction of off-site improvement areas to less-than-significant levels.

Operation of Off-Site Improvement Areas

Off-Site improvement areas are comprised of roadway widening and utilities infrastructure. Use of existing roadways, pipelines, and similar utilities following the construction of the Modified Project would not result in the conversion of sensitive habitat types or indirect impacts that would impact the quality of sensitive habitat types. As discussed in **Section 4.8.5**, with the incorporation of project design features such as treatment ponds and other LID features, stormwater outfall energy dissipaters, and wastewater treatment, operation of the Modified Project would not violate any water quality standards or WDRs or otherwise substantially degrade surface or groundwater quality. Therefore, operation of these features would not result in impacts to biological resources and would not require mitigation. No impact would occur.

Construction of the Bay Trail

Impacts as a result of the construction of the Bay Trail are analyzed within Bay Trail IS/MND, which is incorporated by reference, as described within **Section 1.4.4**. The Bay Trail IS/MND determined that impacts from the construction of the Bay Trail have the potential to result in a substantial adverse effect on riparian habitat or other sensitive natural communities that exist within the proposed trail alignment and in the immediate vicinity. The Bay Trail IS/MND identified **Mitigation Measures BIO-5** and **BIO-6**, described in **Section 4.3.6** to reduce the impacts to sensitive habitats to less than significant by requiring the construction contractor to replant native trees and shrubs in the immediate vicinity of the Bay Trail at a 3:1 mitigation ratio. Additionally, **Mitigation Measure BIO-6** requires the contractor to avoid the spread of invasive or noxious weed species and take precautions to prevent the accidental spread of these species. With implementation of **Mitigation Measures BIO-5** and **BIO-6**, impacts related to construction of the Bay Trail on sensitive habitats would be less than significant.

Operation of the Bay Trail

The Bay Trail IS/MND determined that operation of the Bay Trail would not result in impacts to sensitive habitats, and no additional mitigation measures were included in the IS/MND.

IMPACT 4.3.3	HAVE A SUBSTANTIAL ADVERSE EFFECT ON STATE OR FEDERALLY PROTECTED WETLANDS THROUGH DIRECT REMOVAL, FILLING, HYDROLOGICAL INTERRUPTION OR OTHER MEANS.
Significance Before Mitigation	Potentially Significant
Mitigation Measures	Modified Project Mitigation: MM 4.3-16; MM 4.3-19; MM 4.8-1 through MM 4.8-2 Bay Trail IS/MND Mitigation: BIO-7
Significance After Mitigation	Less Than Significant
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

Impacts to federally protected wetlands or waters would be considered significant and substantial if a project resulted in the direct conversion of wetlands or runoff and erosion that causes degradation of habitat quality. Additionally, work that alters a watercourse or supporting adjacent habitat, such as a riparian community, would be considered a significant impact.

Construction of the Modified Project

A jurisdictional delineation for Wetlands and Waters of the U.S. completed for the 2011 FEIR determined that seasonal wetland and ephemeral drainage features were jurisdictional (Appendix L of the 2011 FEIR); however, the verified delineation expired in March of 2014. Therefore, a re-delineation was prepared that determined the status of features described in the jurisdictional delineation and the likelihood that seasonal wetlands and ephemeral drainages are still likely considered jurisdictional. No new potentially-jurisdictional features were identified, and the majority of features were present as

previously described. The re-delineation is subject to review and verification from USACE (**Appendix P**). The re-delineation, or a separate request for a jurisdictional delineation from USACE, would be required to accurately quantify impacts to wetlands and waters. Therefore, **Mitigation Measure 4.3-19** requires consultation with USACE and/or the RWQCB. For the purposes of this analysis, those features previously identified as present and jurisdictional are considered to remain present and jurisdictional. Based on the location of the areas to be developed within the Planning Areas, the Modified Project has the potential to result in filling of potentially jurisdictional wetlands and waters.

The wetland verification surveys conducted on July 9-10, 2019 concluded that the seasonal wetland and ephemeral drainage features identified in 2011 largely remain present as previously described (**Appendix P**). Development in the Planning Areas and grading areas has the potential to fill up to 1.6 acres of these jurisdictional features, which includes up to 883.8 linear feet of ephemeral drainage.

As described under **Impact 4.3.2**, **Mitigation Measure 4.3-16** would reduce impacts to seasonal wetlands and ephemeral drainages by requiring habitat preservation, restoration, and/or creation to occur at a minimum 3:1 ratio. Construction setbacks around un-impacted ephemeral drainages and wetlands monitored by a qualified biologist during nearby ground disturbance described under **Mitigation Measure 4.3-16** would prevent direct impacts and reduce indirect impacts to avoided wetlands and waters. Additionally, construction protections for wetlands and waters are included as **Mitigation Measure 4.3-16** as well as **Mitigation Measures 4.8-1** and **4.8-2** as presented within **Section 4.8**. Implementation of a SWPPP would require BMPs throughout construction to avoid production of runoff with impaired quality. The SWPPP would additionally require final site stabilization prior to closeout such that bare soil and other potential runoff-impairing issues are addressed.

For impacts to jurisdictional wetlands and waters, the Modified Project would require a CWA Section 401 certification from the RWQCB and a CWA Section 404 permit from USACE. As described under **Mitigation Measures 4.3-16** and **4.3-19**, acquisition of and compliance with these permits would be required for the Modified Project. This would require agency consultation in order to confirm those wetlands and waters that are jurisdictional and for which permitting would be required for removal, filling, or hydrological interruption. As a condition of these permits, impacts to wetlands and waters must be less than significant, and would be included as terms of the permit. Implementation of these mitigation measures would reduce **Impact 4.3.3** as it relates to construction of the Modified Project to a less-than-significant level.

Operation of the Modified Project

Operation of the Modified Project would not result in ongoing activities that would cause the direct removal, filling, or hydrological interruption of those features present on the Project Site with the potential to be jurisdictional wetlands or waters. As stated in **Section 4.8.5**, the Modified Project would incorporate LID stormwater collection and treatment features. The LID features would be compliant with required Municipal Regional Permit (MRP) provision C.3 that regulates water runoff quality post-construction. As described in **Appendix C**, stormwater from the development areas would be routed through treatment ponds prior to discharge to the Bay. Other specific LID features such as the incorporation of bioretention areas, rainwater harvesting, and site design measures would be required to comply with MRP Provision C.3. Additionally, the LID plans would be approved by the City's Public Works Department consistent with

the Contra Costa Clean Water Program requirements. Under the MRP permit and design consistent with the Contra Costa Clean Water Program, operational discharge of runoff would not exceed water quality thresholds such that Waters of the U.S. or State would be impacted. Therefore, there would be no impact to State or federally protected wetlands or waters resulting from operation of the Modified Project.

Construction of the Off-Site Improvement Area

Construction of the off-site improvement areas involves roadway widening and utilities improvements. The majority of this involves work within existing roadways or utility right-of-ways within developed or disturbed habitat. However, the construction of improvement areas has the potential to generate runoff that would degrade the quality of potentially-jurisdictional wetlands or waters, as shown on **Figure 4.3-2**, that may be near construction activities. This would be considered a significant impact. Implementation of **Mitigation Measure 4.8-1** presented within **Section 4.8** would reduce impacts potentially-jurisdictional wetlands or waters through implementation of a SWPPP that would require BMPs throughout construction to avoid production of runoff with impaired quality. The SWPPP would additionally require final site stabilization prior to closeout such that bare soil and other potential runoff-impairing issues are addressed. Implementation of **Mitigation Measure 4.8-1** would reduce impacts to sensitive habitat types resulting from construction of off-site improvement areas to less-than-significant levels.

Operation of the Off-Site Improvement Areas

Operation of the off-site improvement areas would not result in ongoing activities that would cause the direct removal, filling, or hydrological interruption of those features present on the Project Site with the potential to be jurisdictional wetlands or waters. Therefore, there would be no impact to State or federally protected wetlands or waters resulting from operation of the off-site improvement areas.

Construction of the Bay Trail

Impacts as a result of the construction and implementation of the Bay Trail are analyzed within the Bay Trail IS/MND, which is incorporated by reference, as described within **Section 1.4.4**. The Bay Trail IS/MND determined that impacts from the construction of the Bay Trail would result in indirect impacts to one wetland approximately 0.06 acres in size. The Bay Trail IS/MND identified **Mitigation Measure BIO-7**, described in **Section 4.3.6**, which would reduce the impacts to jurisdictional wetlands and waters to less than significant by requiring the installation of temporary silt fencing and Environmentally Sensitive Area fencing. Silt fencing would prevent the entry of fill into wetland, and Environmentally Sensitive Area fencing would prevent construction equipment and workers from entering wetland habitat. With implementation of **Mitigation Measure BIO-7**, impacts on federally protected wetlands related to construction of the Bay Trail would be less than significant.

Operation of the Bay Trail

Operation of the Bay Trail would not result in ongoing activities that would cause the direct removal, filling, or hydrological interruption of those features with the potential to be jurisdictional wetlands or waters. Therefore, there would be no impact to State or federally protected wetlands or waters resulting from operation of the Bay Trail.

IMPACT 4.3.4	INTERFERE SUBSTANTIALLY WITH THE MOVEMENT OF ANY NATIVE RESIDENT OR MIGRATORY FISH OR WILDLIFE SPECIES OR WITH ESTABLISHED NATIVE RESIDENT OR MIGRATORY CORRIDORS, OR IMPEDE THE USE OF NATIVE WILDLIFE NURSERY SITES
Significance Before Mitigation	Potentially Significant
Mitigation Measures	Bay Trail IS/MND Mitigation: BIO-8
Significance After Mitigation	Less Than Significant
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

Impacts to wildlife movement or nursery sites would be considered significant and substantial if a project resulted in the direct conversion of wetlands or runoff and erosion that causes degradation of habitat quality. Additionally, work that alters a watercourse or supporting adjacent habitat, such as a riparian community, would be considered a significant impact. This includes take of migratory or anadromous species, take of migratory birds, or interference with a known wildlife corridor.

Construction of the Modified Project

Point Molate is a relatively biologically isolated land mass that is bound on all sides by either Bay waters or major highways and development. Additionally, it is not recognized as an Essential Connectivity Area (Spencer et al., 2010). While bird nests have been observed on the Project Site and wildlife likely use the site for rearing of young, there are no known nursery sites or other wildlife congregating areas used for social gatherings such as leks (gatherings for mating activities), rookeries, or colonial birthing. Additionally, the Project Site does not provide anadromous fishes access to suitable spawning habitat.

The Modified Project would not result in impacts to a known wildlife corridor or nursery site. The majority of the Project Site would be retained as open space with development clustered and concentrated on and around existing development. Development restrictions would result in a minimum of 70 percent of terrestrial habitat undeveloped as a result of the Modified Project. Therefore, the Modified Project would only result in a maximum of approximately 83 acres. Due to the isolated nature of the Project Site, wildlife use and movement through the Project Site is already limited. Although construction and habitat conversion typically excludes wildlife access to those areas, the Modified Project would be concentrated around existing development and clustered such that a minimum of 70 percent of terrestrial habitat would remain undeveloped. This represents a less-than-significant impact.

Operation of the Modified Project

Following construction of the Modified Project, there would be no ongoing conversion of open space. Operation of the Modified Project would not result in the generation of additional wildlife barriers or loss of potential corridors. Ongoing use of the Project Site would result in higher levels of traffic along existing roadways, but would not generate additional barriers beyond those existing or proposed for the construction phase. This would constitute a less-than-significant impact.

Construction of Off-Site Improvement Areas

Construction of the off-site improvement areas involves roadway widening and utilities improvements. The majority of this involves work within existing roadways or utility right-of-ways that already represent barriers to wildlife movement. Widening of the exiting roadway and utilities improvements would not significantly change existing conditions. Additionally, the off-site improvement areas do not represent suitable nursery habitat for wildlife rearing of young. Therefore, **Impact 4.3.4** as it relates to the construction of off-site improvement areas is considered a less-than-significant impact and would not require additional mitigation.

Operation of Off-Site Improvement Areas

A majority of off-site improvements would be undergrounded and would not impact wildlife following the construction phase. The Modified Project would result in higher levels of traffic along those areas of road widening, however, these roadways already represent a significant barrier to wildlife movement and do not cross through significant wildlife corridors or nursery sites. Therefore, **Impact 4.3.4** as it relates to the operation of off-site improvement areas is considered a less-than-significant impact and no mitigation would be identified.

Construction of the Bay Trail

Impacts as a result of the construction and implementation of the Bay Trail are analyzed within Bay Trail IS/MND, which is incorporated by reference, as described within **Section 1.4.4**. The Bay Trail IS/MND determined that impacts from the construction of the Bay Trail may result in potentially significant impacts to wildlife movement due to the continuous nature of the shoreline and the proximity of the Bay Trail to this stretch of connected habitat. The Bay Trail IS/MND determined that potentially significant impacts could occur should the trail be constructed in a manner that prevented wildlife movement. This analysis concluded that significant wildlife movement barriers such as existing development, roadways, site topography, and isolation by Bay waters already exist along the proposed Bay Trail alignment, and that the Bay Trail itself would be considered a less-than-significant impact to wildlife movement with incorporation of mitigation restricting the use of potentially wildlife-excluding fencing. This is included as **Mitigation Measure BIO-8** and would require that any fencing or structures ancillary to the Bay Trail itself be designed such that wildlife movement would not be impeded. Therefore, with incorporation of this mitigation measure, construction of the Bay Trail would have a less-than-significant impact on wildlife movement or use of nursery sites.

Operation of the Bay Trail

The Bay Trail IS/MND did not identify operational impacts that would adversely affect wildlife movement or use of habitat or nursery sites. Therefore, no mitigation would be necessary for impacts to wildlife movement and use of nursery sites as it relates to operation of the Bay Trail.

IMPACT 4.3.5	CONFLICT WITH ANY LOCAL POLICIES OR ORDINANCES PROTECTING BIOLOGICAL RESOURCES, SUCH AS A TREE PRESERVATION POLICY OR ORDINANCE
Significance Before Mitigation	Potentially Significant
Mitigation Measures	Modified Project Mitigation: MM 4.3-12; 4.3-13; 4.3-20; 4.3-21 Bay Trail IS/MND Mitigation: BIO-9 and BIO-10
Significance After Mitigation	Less Than Significant
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

Conflict with existing local policies and ordinances would be considered significant and substantial if a project resulted in construction or use of land contrary to the overall goals of an existing local regulations. Conflict with specific allowable uses or compensatory requirements would also be considered significant.

An analysis is presented herein of the Modified Project's consistency with binding local policies and ordinances as they relate to impacts on biological resources as a result of the Modified Project. These local policies and ordinances are presented in **Section 4.3.2**.

Construction and Operation of the Modified Project

City of Richmond General Plan

The Modified Project is subject to the City's General Plan. The General Plan identifies general policies such as the protection of sensitive biological resources, restoration of habitat, and promotion of publicly available open space (City of Richmond, 2012). The Modified Project provides for significant open space accessible by the public. With implementation of **Mitigation Measures 4.3-12** and **4.3-13**, the Modified Project would also provide for ongoing habitat restoration to manage invasive scrub and eucalyptus, in accordance with the General Plan. A full consistency analysis of the Modified Project with the General Plan, including its policies that protect biological resources, is provided as **Appendix L**. **Appendix L** includes the conclusion that the Modified Project is consistent with the General Plan as it relates to biological resources.

The General Plan also identifies monarch butterflies as a sensitive species known to roost over winter in the vicinity of the Project Site. Monarch butterflies are candidates for listing under the federal ESA, and removal of an active over-winter roost tree would be a potentially significant impact. While this species was not returned in the USFWS official list of candidate or listed species with the potential to occur on the Project Site, **Mitigation Measure 4.3-20** has been added to the Modified Project, similar to **Mitigation Measure BIO-4** as included for the expansion of the Bay Trail. **Mitigation Measure 4.3-20** would require a pre-construction survey of eucalyptus woodland during the monarch butterfly winter roost season. Eucalyptus trees utilized by monarch butterflies as an over-wintering roost would be protected from removal or disturbance during the roost season. With incorporation of these protections, sensitive biological resources identified in the General Plan would not be significantly impacted by the Modified Project.

San Francisco Bay Plan

The BCDC jurisdiction includes the shoreline and 100 feet landward and parallel to the shoreline. Within the Bay Plan, the Project Site is slated primarily for park use with an emphasis on the protection of existing eelgrass beds. The Modified Project retains a significant portion of public access to open space within the heart of Point Molate, and additionally maintains public access to the entirety of the shoreline within the Project Site. The significance of eelgrass and its preservation is also included within the Bay Plan. The Modified Project would not require any in-water activities that would directly impact eelgrass beds, and no eelgrass beds are to be removed for the Modified Project. Additional discussion on indirect impacts to eelgrass along with compensatory action is considered under **Impact 4.3.2**. There is no additional mitigation necessary for compliance with the Bay Plan as it relates to eelgrass. Additionally, the Modified Project avoids tidal marsh habitat and would not result in the complete conversion of any native habitat type. Habitat restoration discussed under **Impact 4.3.2** further serves to comply with Bay Plan policies. The Bay Plan also promotes minimizing the extraction or dumping of fill within the Bay. The Modified Project would not result in extraction or filling directly into the Bay. A full consistency analysis of the Modified Project with the Bay Plan, including its policies that protect biological resources, is included as **Appendix O**, which concludes that the Modified Project is consistent with the Bay Plan as it relates to biological resources for those areas under BCDC jurisdiction.

Point Molate Reuse Plan

Under the Reuse Plan, development must minimize impacts to the environment, limit development areas, preserve existing topography, protect wetlands, and conserve sensitive species and their habitat. The Modified Project minimizes impacts to the environment through clustered development within previously disturbed or developed areas. The majority of the topography would remain intact, and no alterations would occur along the ridgeline. Grading would only occur in those areas necessary to provide for the safety of the people and structures on the Project Site. There is no anticipated take of special-status species as discussed in detail under **Impact 4.3.1**. Wetland protection and mitigation is discussed in detail under **Impacts 4.5.2** and **4.5.3**. No additional mitigation would be identified for the Modified Project to be consistent with the Reuse Plan's policies that protect biological resources. Therefore, the Modified Project would have a less-than-significant impact.

City of Richmond Urban Greening Master Plan

The City of Richmond Urban Greening Master Plan is a guiding document for City development that also describes goals for private landowners to maximize the benefits of urban greening. Because of the high levels of public access to the Project Site and land ownership by the City of open space and a portion of public-access places such as the shoreline park (depicted as "Open Space" in **Figure 3-12**), the Urban Greening Master Plan is considered for consistency. The Plan goals include: protect the urban forest; expand the urban forest through greening initiatives; manage and support the urban forest and urban greening; educate and promote stewardship of the urban forest; and fund the urban forest and urban greening initiatives. In order to maximize compliance with the goals and policies of the Urban Greening Master Plan, **Mitigation Measure 4.3-21**, that requires compensatory plantings of trees removed on land to be retained by the City, is identified in this Draft SEIR. **Mitigation Measure 4.3-21** requires the use of native tree species and planting specifications included within the Urban Greening Master Plan. In accordance with the Urban Greening Master Plan, use of trees along streetscapes would be maximized.

With the implementation of **Mitigation Measure 4.3-21**, the Modified Project would be consistent with the Urban Greening Master Plan and would have a less-than-significant impact.

City of Richmond Tree Preservation Ordinance

Tree removal on land to be retained as City property would require coordination with the City, and would require approval of the appropriate tree permits. Implementation of **Mitigation Measure 4.3-21** would require compliance with appropriate tree permits, and would ensure consistency with the City's tree protection ordinance, thus reducing the impact to a less-than-significant level.

Construction and Operation of the Off-Site Improvement Area

There are no additional policies or ordinances impacted by the off-site improvement areas. With implementation of **Mitigation Measure 4.3-21**, maximizing use of native trees, as described above, **Impact 4.3.5** as it relates to construction and operation of the off-site improvement areas would be reduced to a less-than-significant level.

Construction and Operation of the Bay Trail

Impacts as a result of the construction and implementation of the Bay Trail are analyzed within the Bay Trail IS/MND, which is incorporated by reference, as described within **Section 1.4.4**. The Bay Trail IS/MND determined that impacts from the construction of the Bay Trail may conflict with any local policies or ordinances protecting biological resources as the construction of the Bay Trail would require the removal or pruning of trees and shrubs. The Bay Trail IS/MND identified **Mitigation Measures BIO-9** and **BIO-10**, described in **Section 4.3.6**, which would reduce the impacts to less than significant by requiring the construction contractor to obtain a tree removal permit as needed, and to provide, install, and maintain tree and shrub protection for the duration of construction. With implementation of **Mitigation Measures BIO-9** and **BIO-10**, impacts on any local policies or ordinances protecting biological resources related to the Bay Trail would be less than significant with mitigation.

IMPACT 4.3.6	CONFLICT WITH THE PROVISIONS OF AN ADOPTED HABITAT CONSERVATION PLAN, NATURAL COMMUNITY CONSERVATION PLAN, OR OTHER APPROVED LOCAL, REGIONAL, OR STATE HABITAT CONSERVATION PLAN
Significance Before Mitigation	No Impact
Mitigation Measures	None Required
Significance After Mitigation	Not Applicable
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

Conflict with existing conservation plans would be considered significant and substantial if a project resulted in construction or use of land contrary to the overall goals of an existing conservation plan. Conflict with specific allowable uses or compensatory requirements would also be considered significant.

Construction and Operation of the Modified Project and Off-Site Improvement Areas

The Project Site and off-site improvement areas do not fall within an existing or proposed Habitat Conservation Plan or Natural Community Conservation Plan. While the Modified Project has the potential to impact sensitive biological resources, there are no approved or proposed habitat conservation plans in conflict with the Modified Project beyond those local policies and ordinances described under **Impact 4.3.6**. There would be no impact.

IMPACT 4.3.7	INCREASE PUBLIC EXPOSURE TO DISEASE VECTORS OR INCREASE POTENTIAL MOSQUITO OR VECTOR BREEDING HABITAT
Significance Before Mitigation	Less Than Significant
Mitigation Measures	Not Required
Significance After Mitigation	Not Applicable
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

The Contra Costa Mosquito and Vector Control District provided a scoping comment letter inquiring on the Modified Project's potential to increase public exposure to disease vectors and to increase potential mosquito or vector breeding habitat. Spread of diseases, and disease vectors due to human interactions with plant and wildlife species is a potentially significant impact to plant and wildlife species as well as to public health. An increase in vector breeding habitat or activities that would cause a proliferation of zoonotic disease has the potential to impact the health of resident wildlife.

Two diseases are listed by the CCHS as zoonotic and vector borne: Lyme disease and West Nile virus (CCHS, 2019). In the County, approximately 0.13 incidences of Lyme disease per 100,000 people occur each year (CDC, n.d.), and approximately one incidence of West Nile virus occurs per every 200,000 individuals. Ticks and mosquitoes both occur naturally throughout the Project Site.

An increase in the occurrence of these diseases would occur if the Modified Project allowed for the proliferation of these vectors in areas where humans or susceptible animals would be exposed to them, or if the Modified Project resulted in high increases in levels of human activity in areas where vectors exist such that increased exposure to existing disease vectors increased the occurrence of West Nile virus or Lyme disease. This is not a threshold of significance under CEQA.

Mosquitoes require standing water for breeding. The Modified Project includes stormwater treatment basins that would provide suitable breeding habitat. RMC § 9.28.020 – Mosquitoes regulates mosquito breeding nuisances and provides specific actions the City can take to ensure that there is no public health

nuisance resulting from breeding places for mosquitos. This ordinance would ensure that mosquito breeding on the Project Site, which is subject to regulation by the City, is controlled. This may require the Homeowner's Association (HOA) to destroy mosquito larvae in stormwater basins should they create a public nuisance or health threat.

The Project Site currently contains six existing stormwater catch basins suitable for mosquito breeding. These catch basins are to be removed and replaced with five new bioretention ponds. Anticipated use of bioretention ponds is balanced with use of flow through planters, pervious pavements, and green roofs in series with cisterns that would limit standing water. Water would not be present in the basins year-round. Because existing ponds are proposed for removal, installation of a similar bioretention ponding surface area would not result in higher levels of mosquito breeding compared to existing conditions onsite.

There are no Modified Project components that would cause a proliferation of ticks on the Project Site. On-Site trails would be maintained through brushy vegetation such that human exposure to ticks would be reduced as included under **Mitigation Measure 4.3-12**.

Human activity on the Project Site would increase with implementation of the Modified Project. However, current disease rates are extremely low for the County even with ongoing recreational activities and dense populations associated with the Bay. Disease prevalence is extremely low despite high population density (CCHS, 2019). The likelihood of contracting Lyme disease or West Nile from a tick or mosquito bite is extremely low. It is therefore not anticipated that an increase in human activity on the Project Site would lead to a significant increase in occurrences of West Nile or Lyme disease.

4.3.5.5 Cumulative Impacts

IMPACT 4.3.8	CUMULATIVE BIOLOGICAL RESOURCES IMPACTS
Significance Before Mitigation	Potentially Significant
Mitigation Measures	Modified Project Mitigation: MM 4.3-1 through MM 4.3-21; MM 4.8-1; 4.8-2; MM 4.10-1; MM 4.10-5 Bay Trail IS/MND Mitigation: BIO-1 through BIO-10
Significance After Mitigation	Less Than Significant
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

The Modified Project would occur with existing, planned, or proposed nearby projects that are described in **Section 5.0**. The geographic scope of **Section 5.0** is the City and the western portion of the County. However, the San Pablo Peninsula is biologically separated from the rest of the City and isolated by Bay waters on three sides. Impacts to biological resources with the potential to be cumulatively significant would therefore occur within the San Pablo Peninsula rather than the City itself. Projects occurring within the vicinity of the Modified Project would be required to follow applicable federal, State, and local laws and regulations that protect biological resources, including those presented in **Section 4.3.2**. The

Modified Project and surrounding existing, planned, or proposed projects subject to CEQA would be required to perform mitigation for those significant impacts in order to minimize and reduce impacts to less-than-significant levels at the project level. The only foreseeable development on the San Pablo Peninsula is the expansion of infrastructure to serve the Modified Project described in **Section 5.0**. The only recent or proposed development in the vicinity of the Modified Project is the development of the Bay Trail, a portion of which would be developed as part of the Modified Project.

Special-Status Species

With incorporation of mitigation presented under **Impact 4.3.1**, the Modified Project would not result in the take of any special-status species. Additionally, the only recent or proposed activity within the San Pablo Peninsula is the Bay Trail. This project was evaluated under CEQA in an IS/MND, which is incorporated by reference (**Section 1.4.4**). It was determined that development of the Bay Trail would not result in the take of special-status species with mitigation presented therein. Potential foreseeable development would consist primarily of infrastructure expansion. This typically occurs within previously developed or disturbed areas where existing infrastructure is located, and thus would not result in take of special-status species. This type of development would be subject to environmental review. Due to the minimal nature of recent, proposed, and foreseeable activities in the vicinity of the Modified Project, and because the Modified Project itself would not result in the take of any special-status species, there would be no significant cumulative impact.

Sensitive Habitat Types

With incorporation of mitigation presented under **Impact 4.3.2**, the Modified Project would have less-than-significant impacts to sensitive habitat types. Development of the Bay Trail and foreseeable infrastructure expansions are anticipated to occur within previously disturbed or developed habitats. Per mitigation measures presented in the IS/MND, Bay Trail alignment would avoid sensitive habitat types and would mitigate at a 3:1 ratio for minimal unavoidable impacts. Because cumulatively considered projects and the Modified Project include mitigation for sensitive habitat types at a ratio exceeding 1:1 and because cumulatively considered projects are cumulatively negligible, there would be no significant cumulative impact to sensitive habitat types.

Jurisdictional Wetlands and Waters

With incorporation of mitigation presented under **Impact 4.3.3**, the Modified Project would have less-than-significant impacts to wetlands and waters. The Bay Trail is anticipated to impact 0.06 acres of wetlands within an existing railroad corridor and would be mitigated for under USACE and RWQCB permits, likely onsite (incorporated by reference in **Section 1.4.4**). Impacts to 0.06 acres of seasonal wetlands does not represent a significant amount of wetland habitat, and mitigation at a 3:1 ratio would ensure in no net loss of habitat. Future development of infrastructure expansion would likely occur within developed or disturbed habitats and would avoid filling, impeding, or otherwise altering jurisdictional wetlands or waters. Given the minimal and mitigated cumulatively considered impacts to wetlands and waters combined with the Modified Project, cumulative impacts to jurisdictional wetlands and waters would be considered less than significant.

Wildlife Use and Movement

With incorporation of mitigation presented under **Impact 4.3.4**, the Modified Project would have less-than-significant impacts to wildlife movement and use of nursery sites. The Project Site is within a biologically isolated land area surrounded by Bay waters on three sides and the City on the fourth. A cumulative impact to wildlife use and movement would therefore only occur should recent, proposed, or future activities occur within the area bound by these wildlife barriers. As discussed in the analysis for **Impact 4.3.4**, the Project Site does not support movement of anadromous fish to and from spawning habitat. Environmental analysis of the Bay Trail determined that, with the requirement to avoid wildlife-impeding fencing, the Bay Trail would not result in significant impacts to wildlife movement. Foreseeable construction is anticipated to include utilities and infrastructure expansion. This is anticipated to occur within developed or disturbed habitats that currently serve as wildlife barriers, such as roadways. A significant portion of this work would likely be undergrounded. Because cumulative development would be predominantly within developed habitats and existing wildlife barriers, cumulative impacts to wildlife use and movement of habitat would be considered less than significant.

Applicable Regulations and Conservation Plans

With incorporation of mitigation presented under **Impact 4.3.5**, the Modified Project would be consistent with applicable regulations and conservation plans. Local regulations and jurisdictional policies would apply to regional activities regardless of whether review under CEQA was necessary. Recent, proposed, and foreseeable projects considered in **Section 5.0** would not be exempt from local policies and regulations and would therefore be required to comply with applicable regulations and conservation plans. Because the Modified Project would have less-than-significant impacts with mitigation and cumulatively considered projects would similarly be required to demonstrate compliance with guiding regulations and conservation plans, cumulative impacts would be considered less than significant.

4.3.6 MITIGATION MEASURES

Review of the mitigation measures identified in the 2011 FEIR determined that some measures required revisions or were not applicable to the Modified Project. It was determined that several of the mitigation measures that were identified in the 2011 FEIR are no longer applicable in regards to biological resources for the Modified Project; however, new and more relevant mitigation measures would be implemented and are addressed below. **Appendix K** provides a summary of whether each mitigation measure from the 2011 FEIR was revised, deleted, or kept as is and the reasoning for that determination.

MM 4.3-1 Suisun Marsh Aster Protection: The Suisun marsh aster shall be avoided to the maximum extent practicable. After pre-construction surveys identified by **Mitigation Measure 4.3-2**, setbacks of 50 feet, or the maximum buffer possible where a full 50 feet is not possible, shall be established around the total area where the population occurs via high visibility fencing prior to grading or construction. A qualified plant biologist shall be present during any and all grading or other construction activities that occur within 50 feet of the Suisun marsh aster setback. The qualified biologist shall act as a construction monitor to ensure the fencing remains intact and that construction activities do not penetrate this setback.

If complete avoidance of the Suisun marsh aster population cannot be reasonably achieved, and impacts to this species are unavoidable, consultation shall be initiated with the CDFW to ensure that avoidance

and minimization measures are employed, and to require compensatory mitigation for any remaining impacts. Upon CDFW approval, the impacted individual plants shall be transplanted out of their existing locations and into an equivalent and suitable habitat that occurs within an established on-site open space preserve and monitored for survival for a total of five years. A qualified plant biologist shall determine the exact transplanting locations and shall supervise or perform all of the transplanting activities.

Transplanting activities shall occur during the fall months as possible, prior to the onset of heavy rains and inundation of seasonal wetland features to minimize transplant stress to the plants and ensure transplant success. Transplanting activities shall not occur in the spring, summer, or winter months, unless prior approval is obtained from CDFW. If CDFW requires additional on-site plantings to fully offset any impacts, then Winehaven Legacy LLC (the Applicant) shall comply with that requirement.

MM 4.3-2 Special-Status Plants: A botanical survey of the development footprint shall be conducted prior to construction to confirm that establishment of those special-status plants with the potential to occur onsite has not occurred within the development footprint. Surveys shall occur within the appropriate identification period for those special-status plants with the potential to occur within the development footprint to be surveyed. Should a special-status plant be identified on or within 50 feet of ground disturbance, a 25-foot high-visibility no disturbance buffer shall be established by the qualified biologist, except if a larger buffer is required by a different project mitigation measure, such as **Mitigation Measure 4.3-1** for the Suisun Marsh Aster, or determined necessary by the qualified biologist. Results of this pre-construction survey shall be documented in a memo to the City.

Should a special-status plant not previously identified on the Project Site be observed within the development footprint, the CDFW and/or USFWS shall be consulted as appropriate in order to determine suitable mitigation actions. For CNPS rank 1 and rank 2 plants, consultation with the City shall occur to determine an appropriate course of action consistent with the City's goals and policies related to conservation of biological resources. This mitigation shall be completed via transplanting or compensatory planting at a minimum ratio of 2:1. Should take of a State or federally listed plant species be unavoidable, an incidental take permit from CDFW and/or USFWS, may be required pursuant to applicable laws and regulations.

MM 4.3-3 Environmental Awareness Training: An Environmental Awareness Training shall occur for all construction personnel working on the Project Site prior to any construction personnel being allowed to perform outdoor construction activities for the Project and its off-site improvements. A qualified biologist shall prepare instructional materials for the City's review and approval and shall train designated personnel to perform Environmental Awareness Training for construction staff. This training shall include the following.

- A discussion on the importance of disease control and invasive species management in protecting sensitive biological resources
- A discussion on those special-status wildlife with the potential to occur within the impact area
- A discussion on special-status plants observed on the Project Site
- Relevant biological information on those special-status species
- What to do in the event of an occurrence of a special-status species on the Project Site

Record of this training shall be maintained on the Project Site and shall be made available to agencies upon request.

MM 4.3-4 Preservation and Protection of Eelgrass: The eelgrass bed habitat onsite shall be completely avoided during construction and operation of the Modified Project. Specifically, water vessels (e.g., ferries, barges, water taxis/shuttles) servicing the retrofitted pier shall not come within 1,000 feet of the eelgrass bed habitat as identified in the pre-construction and annual surveys. The existing pier shall be utilized and the total surface area of the pier shall not be increased. Improvement of the existing pier shall be implemented as necessary, but no new piers and/or structures shall be built within or in the vicinity of any eelgrass bed habitat. Activities associated with the pier reuse shall be subject to the acquisition of necessary permits. These may include, but are not limited to, necessary BCDC permits.

The Applicant shall employ dust control measures to ensure excavated soil transferred from the Project Site to barges docked at the end of the pier using a conveyor belt system does not result in debris in the Bay. Such dust control measures shall include, but not be limited to, the following.

- The conveyor belt system shall be completely enclosed to prevent any loose aggregate, soils, or dust from entering the Bay during these transport operations.
- Sediment shall be watered as needed to prevent dust from becoming airborne.
- Vehicles transporting soils shall utilize designated routes. Should these routes include dirt roads, these roads shall be watered as needed to prevent excessive production of dust.
- Vehicles transporting soils across dirt roads shall not exceed a speed of 15 miles per hour.
- Soils shall be covered when transported from the location of excavation to the removal offsite.

All water vessel routes shall be limited to the deep-water shipping channel when not moored at the pier, and velocities shall be lowered as water vessels approach the pier to reduce waking. Water vessel speeds shall be limited to 10 knots or less within 750 feet of the pier. In addition, water vessel traffic shall not route from the terminal landward towards the shoreline. Mooring of private boats is not to be allowed on the pier. An appropriate signage and/or a buoy system shall be implemented to properly inform marine traffic of the sensitive eelgrass habitats and to help keep any vessels away from these habitats.

Prior to construction, the Applicant shall prepare an eelgrass monitoring plan consistent with the California Eelgrass Mitigation Policy and Implementing Guidelines, to be submitted to the NMFS for review and approval. The Plan shall require eelgrass surveys be conducted immediately prior to construction, annually throughout construction, and three years following the initial use of the pier to ensure ship travel routes do not impact eelgrass. Surveys shall be conducted pursuant to protocols outlined in the California Eelgrass Mitigation Policy and Implementing Guidelines, and shall document eelgrass distribution and density on both the Project Site and at a suitable control site during the eelgrass growing season. Results of surveys shall be provided to the NMFS Santa Rosa office staff within 60 days of completion. If NMFS determines the Modified Project actions have adversely impacted eelgrass in or adjacent to the Project Site based on pre- and post- work distribution and density surveys, an eelgrass mitigation plan shall be provided to NMFS for review and approval within 60 days of the determination of adverse impacts. The mitigation plan shall provide for no net loss of habitat function, and shall include criteria consistent with the California Eelgrass Mitigation Policy and Implementing Guidelines (NOAA, 2014) as well as one or more of the following.

- In-kind creation, restoration, or enhancement of habitat with a success ratio following three years of monitoring at or exceeding 1.2:1
- Purchase of mitigation credits from an established and NMFS-approved eelgrass mitigation bank at a ratio of 1:1 for banks established over three years
- Purchase of mitigation credits from a NMFS-approved eelgrass mitigation bank at a NMFS-approved ratio exceeding 1:1 for banks that have been established less than three years
- Out-of-kind mitigation only in the circumstance that in-kind mitigation is not feasible, and out-of-kind mitigation provides for sufficient ecological benefits approved by NMFS and other trustee agencies such as CDFW

MM 4.3-5 Special-Status Birds – Nesting: Should work occur during the general nesting season (February 15 to September 15), a pre-construction nesting bird survey shall be conducted by a qualified biologist no more than five days prior to the start of ground-disturbing activities as possible. The survey shall cover all areas within 500 feet of planned construction activities. Should an active nest be identified, a high visibility “disturbance-free” buffer shall be established by the qualified biologist based on the species identified. The buffer distance shall be based upon the potential for construction noise, visual disturbance, and other disruptive metrics with the potential to affect nesting, the species of bird with the nest, and shall be at least 500 feet, unless a smaller buffer is warranted based on the recommendation of the qualified biologist and available CDFW and/or USFWS guidelines for the protection of nests and breeding a particular species. Should the nest of a special-status bird be identified, the qualified biologist along with CDFW and/or USFWS shall be consulted based on the regulatory jurisdiction of the species and nest to determine suitable buffer size and any other screening measures to help minimize or avoid the impact. Alternatively, should the qualified biologist be approved by CDFW for the purpose of performing nesting bird surveys prior to these surveys, the qualified biologist may set the appropriate construction buffer for a special-status bird nest without additional consultation.

This buffer shall be maintained until it can be verified by a qualified biologist that the nestlings have fledged or the nest has failed. Should construction activities cease for five consecutive days or more, an additional nesting bird survey shall be required should construction resume during the general nesting season. Survey results shall be documented in a memorandum.

Should take of a special-status bird species be unavoidable, an incidental take permit from CDFW and/or USFWS, as appropriate, shall be required.

MM 4.3-6 Nighttime Lighting Plan: A nighttime lighting plan shall be developed by the Applicant and approved by the City prior to groundbreaking. The plan shall describe measures to avoid and/or minimize impacts to shorebirds and migratory birds as well as sensitive eelgrass habitat from nighttime lighting. The nighttime lighting plan shall consider Dark Sky Initiative measures in reducing the impacts of nighttime lighting. The lighting plan shall include, but not be limited to the following provisions.

- Outdoor lighting known to attract shorebirds and migratory birds (e.g., searchlight advertising lighting, uplighting on signs, spotlights, floodlights, etc.) shall be prohibited.
- No up-lighting shall be allowed.
- Nighttime lighting or spillage of light onto beach strand and Bay waters shall be prohibited.

- All lighting fixtures associated with the development of the Modified Project shall be shielded, provide maximum efficiency, and reduce spill over through cut-off mechanisms (i.e., light that spills beyond the intended areas to be lit, but that is not projected directly upward).
- Lighting shall be deliberately directed downward and away from marshes and beaches, and optimize daylight by turning off when daylight provides sufficient illumination for vision and safety.
- Motion-sensitive lighting, lower intensity lights, and appropriately programmed timed lights shall be used to the maximum extent feasible.
- All outdoor lights other than those required for safety or security shall be off from the hours of 11 p.m. to 7 a.m. Lighting required for safety and security, such as pathway illumination and parking lot lighting, shall be designed to reduce light spillage and shall be of the minimum intensity to serve the purpose of illumination.
- Nighttime security lights shall be full cut off lights. Illumination shall be kept as low as possible while still providing the required security and safety illumination.
- All lighting shall comply with the RMC Article 15.04.604 as applicable.

MM 4.3-7 Special-Status Birds – Predation: Contract and HOA provisions shall require contractors and occupants of the Project Site to implement measures to deter and/or minimize disturbance by common scavenging mammals (e.g., raccoons, opossums, feral cats, and skunks) which could potentially agitate, disrupt, or otherwise frighten bird species that may be present within the Project Site. Such measures shall include, but are not limited, to regular collection and removal of trash generated by the facility, the use of sealed and secure trash dumpsters and bins throughout the facility, and fencing around trash collection areas. HOA provisions shall include the following.

- Open trash receptacles accessible to wildlife shall be prohibited.
- Curbside pickup for bulky waste and other events requiring placement of waste in areas of wildlife access shall occur as close to the scheduled pick-up event as possible.
- With the exception of bird feeders and similar items, placement of food outside shall be minimized. Pet food should be kept indoors as possible, especially during nighttime hours.

MM 4.3-8 Special-Status Mammals – Bats: A qualified bat biologist shall conduct pre-construction bat surveys within seven days of ground disturbance of all potentially suitable bat habitats in the vicinity of any construction activities, including buildings scheduled to be modified or demolished and the pier that have the potential to support special-status bat roosts and trees with sloughing bark and basal hollows. If no bats and/or evidence of bats (e.g., guano) are detected during the pre-construction surveys, no additional surveys are required. Pre-construction surveys shall include, at a minimum, evening fly-out surveys accompanied by acoustic monitoring. If no evidence of bats occurs, then no further mitigation shall be necessary. Should construction halt for seven days or more, additional pre-construction surveys shall occur in areas with potential bat roost habitat.

If bats or evidence of bats are detected during the pre-construction surveys, a qualified bat biologist shall facilitate bat evacuation from structures, or removal of bat habitat trees. Bat habitat trees scheduled for removal shall be demarcated using high-visibility markers. Removal of potential bat roost habitat, such as trees with sloughing bark, shall occur over two days, with initial partial removal occurring the first evening and full removal occurring the following day. Evacuation may include the installation of exclusionary (e.g., mist) nets around occupied habitats while bats are away from their roosts. The netted habitats shall be

monitored frequently at appropriate times and intervals to ensure that all bats have left the roosts and that no bats re-enter during the duration of construction activities impacting the bat habitat structure. The qualified bat biologist shall determine the specific protocol regarding bat removal within the larger historic buildings on-site. An exclusionary plan, should the qualified biologist determine that special-status bat exclusion from existing structures is necessary, shall be provided to the USFWS or CDFW as appropriate. Once construction activities are complete, the exclusionary nets shall be removed. Should construction halt for a period of more than seven days, an additional pre-construction survey shall occur for suitable bat roost habitat for which exclusion has not occurred.

Should take of a special-status bat species be unavoidable, an incidental take permit from the CDFW and/or USFWS, as appropriate, shall be required.

MM 4.3-9 Maintenance of Sensitive Habitats: Signage at all public access locations in proximity to beach strand habitat and tidal marsh habitat shall be posted that describes the sensitive nature of these habitat types and their importance within the Bay ecosystem. Signage shall also be posted at the major trailheads within the open space informing visitors of the presence and importance of sensitive coastal scrub, coastal terrace prairie, and riparian habitat. Signage shall also include action items for visiting public to encourage protection of these valuable resources. Action items may include, but are not limited to:

- proper collection and disposal of trash;
- leashing of pets to prevent harassment of wildlife;
- passive activities to enjoy wildlife without disturbing natural behavior;
- proper maintenance of recreational equipment to prevent the spread of invasive species;
- discouragement of the removal of plants or other biological resources; and
- restrictions on allowable transportation (vehicles, bicycles, horses, etc.) on trails near sensitive habitat.

Park infrastructure installed on the Project Site such as benches and trail access shall be located at least 100 feet away from tidal marsh habitat on the Project Site, and signage restricting public access from tidal marsh habitat shall be posted. Park infrastructure shall also include waste receptacles sufficient in number and size to service public use of the parks and open space with regular service to prevent over spilling. Removal of litter on beach strand or tidal marsh habitat shall occur as a component of servicing of waste receptacles.

MM 4.3-10 Invasive Species Management: Invasive plant species removal shall occur within parks or green space during the construction phase designed to incorporate the natural landscape. Invasive scrub and non-native annual grasses shall be removed and replaced with native coastal scrub and native coastal grassland species. Additionally, all vehicles and construction equipment shall be kept clean and free of debris that could track invasive species or pathogens onto the Project Site through routine exterior washing and removal of interior debris. A log of vehicle conditions shall be kept for all vehicles frequently entering and exiting the Project Site, and maintenance activities related to vehicle cleanliness shall occur following the evaluation that a vehicle is no longer in a clean condition.

MM 4.3-11 Coastal Scrub Habitat Impacts: Impacts to coastal scrub shall be mitigated at a 1.5:1 acre ratio, such that for each acre impacted, no less than 1.5 acres of in-kind habitat shall be created, restored, or preserved. The following activities shall occur related to coastal scrub mitigation.

1. Those 12.7 acres of invasive scrub habitat within the Open Space and not impacted by grading shall be removed and replaced with coastal scrub habitat similar to native coastal scrub habitat present on the Project Site. These acres shall be managed and monitored annually for a minimum of five years. A qualified biologist shall prepare an annual report on the status of habitat restoration activities with recommendations on adaptive management measures as necessary. Mitigation shall be deemed complete when, after five years of management and monitoring, the qualified biologist determines that the mitigation has achieved a 75 percent native plant cover within the coastal scrub areas. Additional years of management and reporting shall occur should mitigation fail to meet success criteria. These reports shall be maintained by the Applicant and be available to agencies upon request. Specific management and maintenance procedures shall be included within the Open Space Plan.
2. The 32.6 acres of coastal scrub habitat within the Open Space and not impacted by grading shall be preserved.
3. Of those acres defined in (2), habitat restoration and enhancement activities shall occur such that overall mitigation of (1) and (2) above and the replanting of graded areas result in mitigation at a ratio of not less than 1.5 acres restored and preserved per 1 acre of impact. Coastal scrub mitigation areas shall be managed and monitored for a total of five years to remove and prevent the further encroachment of invasive scrub. A qualified biologist shall prepare an annual report on the status of preserved habitat with recommendations on adaptive management for invasive species as necessary. These reports shall be maintained by the Applicant and be available to agencies upon request. Specific management and maintenance procedures shall be included within the Open Space Plan identified by **Mitigation Measure 4.3-12**.
4. Grading areas that remove coastal scrub or invasive scrub habitat shall be replanted with coastal scrub habitat as possible in concurrence with or following stabilization of the grading area. Those acreages necessary to reach the mitigation goal of 1.5:1, should additional acreage be necessary beyond (1) and (3) above, shall be subject to the same monitoring, management, and reporting requirements as detailed in (1) above.

Restoration and management efforts shall include an emphasis on creating and maintaining a native coastal grass understory as appropriate. Identification of coastal scrub preservation, restoration, and/or creation areas shall be reviewed and approved by the City through the Open Space Plan.

MM 4.3-12 Dedicated Open Space: An Open Space Plan shall be established by the Applicant for the proposed open space and shoreline park that would be held in ownership by the City. The Plan shall act as a guide in implementing mitigation related to sensitive habitat preservation, creation, and restoration. The Open Space Plan shall additionally act as a binding agreement between the Applicant and the City to identify final impacts following lot development, to locate mitigation areas, and to assure completion of mitigation by the Applicant. The Open Space Plan shall include, at a minimum, the following.

- Approved activities within Open Space. These activities shall be predominantly passive and include activities such as maintenance, monitoring, and public access along dedicated trails.

- Maintenance activities of trails such that trails are clearly defined and are not overgrown with foliage. These activities shall be designed to promote visitors to stay on pathways and to reduce the likelihood of disturbing sensitive habitat.
- Compliance with the tree removal permits and Urban Greening Master Plan requirements on City land.
- A description of any habitat preservation, creation, or restoration completed within Open Space for coastal scrub, coastal terrace prairie, mixed riparian, seasonal wetland, or ephemeral drainage habitats. This shall include a final statement of Modified Project impact acreages by habitat type, and a map clearly defining where preservation and mitigation areas are located.
- To the degree feasible, the Open Space Plan shall emphasize the removal of invasive plants, and their replacement with native plant species. Replacement plant species shall emphasize the use of locally rare, culturally significant, or ecologically important species.

A qualified biologist shall prepare the Open Space Plan, and a qualified biologist shall perform any recommended monitoring, reporting, and adaptive management recommendations to reach performance criteria as they relate to the Open Space Plan and sensitive habitat mitigation required for the Modified Project. The City shall review and approve the Open Space Plan. The City may choose to consult with the CDFW, USFWS, and other agencies as appropriate. The Applicant shall be responsible for ensuring that the Open Space Plan is completed prior to ground disturbance and that all mitigation and monitoring occurs as detailed in the approved Open Space Plan.

MM 4.3-13 Vegetation Management within Planning Areas: Vegetation management shall be included as a component of the Covenants, Conditions, and Restrictions of the HOA. The HOA shall be responsible for ensuring that the following are achieved related to vegetation management.

- Landscaping established and maintained by the HOA shall be consistent with the aesthetics and functionality of the landscape with an emphasis on the use of native plants within landscaping designs. Trees planted in these areas shall consist of those species native to the Project Site.
- Native vegetation shall be sourced locally as feasible.
- Landscaping and removal of vegetation shall not occur within the designated Open Space except as provided within the Open Space Plan or for the purpose of safety.

Additionally, the HOA shall ensure that residences minimize overall impacts to sensitive habitats through the following measures.

- The HOA shall provide new residents with information on native species and encourage their use on private landowner parcels.
- The HOA shall provide new residents with information on the sensitive habitats present on the Project Site and the importance of these habitats.
- The HOA shall prohibit the planting of non-native tree species.

MM 4.3-14 Mixed Riparian Habitat: Mixed riparian habitat shall be avoided as practical through design. Setbacks at a minimum of 50 feet, or the largest buffer possible when 50 feet is not feasible, shall be established with high-visibility fencing by a qualified biologist around all areas of avoided mixed riparian habitat. The biologist may require a larger setback after consideration of the soil types, slope between the

buffer and construction, hydrology, vegetation, and runoff potential. Un-impacted mixed riparian habitat adjacent to impacted mixed riparian habitat shall also be demarcated with high visibility markers. A qualified biologist shall be present during development activities that ensue within 50 feet of the fenced riparian setbacks. The qualified biologist shall act as a construction monitor to ensure the fencing remains intact and that construction activities do not occur within these avoidance buffers. No staging of equipment or other construction-related activities shall occur within non-impacted mixed riparian habitat or buffers established by the qualified biologist.

Additionally, the Applicant shall provide CDFW with the proper notification of impacts to ephemeral drainages and associated riparian habitat for those impacted drainages supporting mixed riparian habitat. All compensatory action required through the appropriate LSAA permit for impacts to riparian habitat shall be adhered to. This shall include, but is not limited to, habitat preservation and/or habitat restoration of in-kind habitat exceeding 1:1, or creation of habitat at a minimum of 1:1.

Mitigation for direct impacts to mixed riparian habitat not covered under an LSAA shall occur through a combination of habitat preservation and/or restoration and shall, at a minimum, include the following.

- Should mitigation occur through preservation, preservation shall occur at a minimum ratio of 2:1. Areas designated for preservation shall be maximized within designated open space, and shall not occur within residential lots. Those areas selected for preservation shall be approved by the City and shall be subject to the compensatory actions set forth in this mitigation. Preservation areas shall be identified within the Open Space Plan.
- When mitigation occurs through the enhancement or restoration of habitat, mitigation shall occur at a minimum ratio of 2:1. Restoration and/or enhancement of habitat shall occur within designated open space as possible. Monitoring of mitigation activities shall be performed by a qualified biologist for a minimum of three years. The qualified biologist shall prepare an annual report on the progress of mitigation with identified management actions. These reports shall be submitted to the City and be available to agencies upon request. Mitigation shall be deemed complete once the qualified biologist has determined that the success or establishment of restoration or enhancement activities meets or exceeds 80 percent. The qualified biologist may utilize bank stabilization, percent native ground cover, relative ratios of the herbaceous, shrub, and tree layers, as well as other habitat quality indicators in order to determine the level of success. At a minimum, ground cover shall meet or exceed 80 percent, with a native plant cover percent meeting or exceeding that of impacted mixed riparian habitat. Additional years of management and reporting shall occur should mitigation fail to meet success criteria. Specific management and maintenance procedures shall be included within the Open Space Plan.

MM 4.3-15 Protection of Beach Strand: The beach strand habitat onsite shall be completely avoided. Replacement/restoration is not appropriate for this habitat type due to its inherent intrinsic value, role as habitat for plant and wildlife species (including special-status species), increasing threats by development, and its currently limited distribution within the region. The Modified Project shall be designed to avoid beach strand habitat. To ensure prevention of direct impacts and avoid indirect impacts to the beach strand habitat onsite during operation, the existing roads and pathways within and adjacent to beach strand habitat shall be used, and no new roadways in beach strand habitat shall be constructed.

Improvement of the existing roadways that do not convert beach strand habitat may be implemented as necessary, but no new roadways shall be within beach strand habitat.

To avoid impacts during construction, setbacks shall be established (i.e., staked) around all areas of beach strand habitat within 100 feet of Modified Project development. Setbacks at a minimum of 50 feet, or the largest buffer possible when 50 feet is not feasible, shall be established with high-visibility fencing by a qualified biologist around beach strand habitat. Larger setbacks up to 100 feet may be required by the qualified biologist based on the soil type in the area where construction would occur, slope between the construction work and area with beach strand habitat, local hydrology, existing vegetative cover, and runoff potential of construction areas. Prior to the onset of development activities within 100 feet of beach strand habitat, high visibility fencing shall be installed to delineate the beach strand setbacks. A qualified biologist shall be present during any and all development activities that occur within 50 feet of the fenced beach strand setbacks to ensure no indirect impacts occur to beach strand habitat.

MM 4.3-16 Seasonal Wetlands, and Ephemeral Drainage Impacts: Consultation shall occur with USACE in order to verify the presence of jurisdictional wetlands and waters impacted by the Modified Project. The Applicant shall obtain a CWA Section 404 permit from USACE for impacts to jurisdictional wetlands or waters, and a corresponding CWA Section 401 Water Quality Certification from the SFBRWQCB. Typical 404-permit mitigation occurs at a ratio of 1:1 acres created versus impacted and 2:1 acres restored/enhanced versus impacted, though individual permit conditions may vary.

The Applicant shall provide the required notification to CDFW under Section 1602 of the California Fish and Game Code for alteration of the ephemeral drainages and shall obtain an LSAA if required by CDFW prior to ground disturbance. The conditions of these permits, as well as any additional permits related to impacts to biological resources required for the Modified Project, shall be adhered to.

Mitigation for direct impacts to seasonal wetlands and ephemeral drainages not covered under the permits listed above shall occur through a combination of habitat preservation, creation, and/or restoration and shall, at a minimum, include the following.

- Should mitigation occur through preservation, preservation shall occur at a minimum ratio of 2:1. Areas designated for preservation shall be maximized within designated open space, and shall not occur within residential lots. Those areas selected for preservation shall be approved by the City and shall be subject to the compensatory actions set forth in this mitigation and necessary permit conditions.
- Seasonal wetlands may be mitigated for through restoration of habitat at a 2:1 ratio, or creation of habitat at a 1:1 ratio. Restoration and/or creation of habitat shall occur within designated open space as possible. Monitoring of mitigation activities shall be performed by a qualified biologist for a minimum of three years consistent with the terms of necessary permits. The qualified biologist shall prepare an annual report on the progress of mitigation with identified management actions. These reports shall be submitted to the City and available to agencies upon request. Mitigation shall be deemed complete once the qualified biologist has determined that the success or establishment of restoration or habitat creation activities. The biologist may use a combination of habitat indicators such as ground stabilization, percent native ground cover, relative ratios of the herbaceous, shrub, and tree layers, as well as other habitat quality indicators in order to

determine the level of success. At a minimum, native plant cover percent shall meet or exceeding that of impacted wetland habitat. Ephemeral drainage mitigation shall not be channelized and shall promote stable banks and native plant species. Additional years of management and reporting shall occur should mitigation fail to meet success criteria. Specific management and maintenance procedures shall be included within the Open Space Plan.

- Ephemeral drainages shall be offset by no less than the linear feet length of impacts. Monitoring of mitigation activities shall be performed by a qualified biologist for a minimum of three years consistent with the terms of necessary permits. The qualified biologist shall prepare an annual report on the progress of mitigation with identified management actions. These reports shall be submitted to the City and available to agencies upon request. Mitigation shall be deemed complete once the qualified biologist has determined that the success or establishment of restoration or habitat creation. The biologist may use a combination of habitat indicators such as ground stabilization, percent native ground cover, relative ratios of the herbaceous, shrub, and tree layers, as well as other habitat quality indicators to determine the level of success. Ephemeral drainage mitigation shall not be channelized and shall promote stable banks and native plant species. Additional years of management and reporting shall occur should mitigation fail to meet success criteria. Specific management and maintenance procedures shall be included within the Open Space Plan.

Additionally, setbacks of 50 feet, or the largest setback possible when a full 50 feet is not feasible, shall be established by a qualified biologist around each of the seasonal wetlands or ephemeral drainage features within 100 feet of project development. The biologist may require a larger setback of up to 100 feet after consideration of the soil types, slope between the buffer and construction, hydrology, vegetation, and runoff potential. Setbacks shall be marked off with high visibility fencing prior to the commencement of construction. A qualified biologist shall be present during any and all construction activities that ensue within 50 feet of any buffer area of seasonal wetlands or ephemeral drainage. The qualified biologist shall act as a construction monitor to ensure that indirect impacts from construction to waters/wetlands do not occur and the fencing remains intact.

MM 4.3-17 Protection of Tidal Marsh: The tidal marsh habitat onsite shall be completely avoided. A minimum setback of at least 50 feet shall be established around the tidal marsh habitat to prevent any impacts during construction. The exact width of the tidal marsh setback may be larger based on specified conditions of associated permits from the BCD, USACE, or other jurisdictional agencies.

Prior to commencement of construction, high visibility fencing shall be installed to delineate the tidal marsh setback. A qualified biologist shall be present during any and all development activities that ensue within 50 feet of the fenced tidal marsh setback. The qualified biologist shall act as a construction monitor to ensure the fencing remains intact and that construction activities do not disturb habitat within this setback buffer.

MM 4.3-18 Coastal Terrace Prairie Habitat Impacts: Impacts to coastal terrace prairie shall be mitigated at a 2:1 ratio, such that for each acre impacted, no less than two acres of in-kind habitat shall be created, restored, or preserved. The following activities shall occur related to coastal terrace prairie mitigation.

1. Those 6.2 acres of coastal terrace prairie habitat within the Open Space and not impacted by grading shall be preserved. These acres shall be managed and monitored for a total of five years to prevent significant increase in invasive grasses cover. A qualified biologist shall prepare an annual report on the status of preserved habitat with recommendations on adaptive management for invasive species as necessary. These reports shall be maintained by the Applicant and available to agencies upon request. Specific management and maintenance procedures shall be included within the Open Space Plan.
2. Those 18.8 acres of invasive annual grassland habitat within the Open Space and not impacted by grading are suitable for restoration to a coastal terrace prairie composition and shall be restored such that the minimum 2:1 mitigation ratio is achieved. Areas where annual grasslands have been impacted by grading may also be areas that are suitable for restoration to coastal terrace prairie. These acres shall be managed and monitored annually for a minimum of five years. A qualified biologist shall prepare an annual report on the status of habitat restoration activities with recommendations on adaptive management measures as necessary. Mitigation shall be deemed complete when, after five years of management and monitoring, the qualified biologist determines that the mitigation has achieved successful conversion of annual grassland to coastal terrace prairie habitat, with a percent native grass cover equal to or exceeding the average percent cover of native grasses of preserved coastal terrace prairie. Additional years of management and reporting shall occur should mitigation fail to meet success criteria. These reports shall be maintained by the Applicant and be available to agencies upon request. Specific management and maintenance procedures shall be included within the Open Space Plan.
3. Grading areas that remove coastal terrace prairie or annual grassland habitat shall be replanted with coastal terrace prairie habitat as possible in concurrence with or following stabilization of the grading area. Those acreages necessary to reach the mitigation goal of 2:1, should additional acreage be necessary beyond (1) and (2) above, shall be subject to the same monitoring, management, and reporting requirements as detailed in (2) above.

Identification of coastal terrace prairie preservation, restoration, and/or creation areas shall be reviewed and approved by the City through the Open Space Plan.

MM 4.3-19 Impacts to Wetlands and Waters: The Applicant shall obtain an approved jurisdictional delineation from USACE prior to the commencement of construction to determine whether the wetlands and waters on the Project Site are jurisdictional under the CWA. A CWA Section 404 permit and CWA Section 401 certification for impacts to any jurisdictional features shall be obtained prior to ground disturbance. For those features that are not jurisdictional under the CWA but are waters of the State, the Applicant shall secure waste discharge requirements from the RWQCB prior to commencement of construction.

The Modified Project shall avoid jurisdictional waters to the extent practicable through project design. Setbacks of a minimum 50 feet, or maximum possible when a full 50 feet is not practicable, shall be established by a qualified biologist around each of the wetland features within 100 feet of project development, unless the soils, slope, hydrology, vegetation, and runoff potential determine that a greater buffer distance up to 100 feet is required. Setbacks shall be demarked by installation of high visibility fencing prior to the commencement of construction activities. A qualified biologist shall be present during any and all construction activities that ensue within 50 feet of the wetlands or waters buffers. The qualified

biologist shall act as a construction monitor to make sure the fencing remains intact and that construction activities do not occur within the wetlands or waters avoidance buffer areas. Permit terms and conditions related to buffers shall supersede buffers presented herein in case of conflict.

MM 4.3-20 Protection of Monarch Butterflies: Should ground-disturbance activities commence within eucalyptus woodland within monarch over-wintering season (October 1 through February 28), a pre-construction survey shall be completed by a qualified biologist to determine the presence or absence of roosting monarch butterflies. Should no roosts be identified, no further mitigation would be necessary. Should active monarch butterfly roost trees be identified, the tree shall not be removed until after the qualified biologist has determined that the monarch butterflies have vacated the roost. Active roost trees shall be protected with a construction buffer demarcated by a qualified biologist with high-visibility fencing or flagging around the outer boundary of the active roosting habitat. The buffer shall remain until it is determined by the biologist that the roost is no longer active.

MM 4.3-21 Compliance with Local Plans and Ordinances: The Modified Project shall maximize the use of native trees consistent with the City Urban Greening Master Plan's recommendations on tree species and planting specifications. Trees removed on City land as a result of the Modified Project shall be mitigated for in the following way.

- Permitted removal of native trees shall be replanted at an in-kind 2:1 ratio.
- Permitted removal of non-native trees shall be replaced with a native tree recommended within the Urban Greening Master Plan at a 2:1 ratio.
- Planted trees shall be monitored annually by a qualified biologist for a minimum of three years. Mitigation shall achieve a minimum success rate of 75 percent survival after three years. The annual report shall be submitted to the City and shall include information on tree planting locations, health of trees, diameter at breast height (if applicable), and the number and location of necessary plantings to replace failed trees. Additional years of monitoring and maintenance activities may be required to achieve success criteria.
- Use of compensatory tree plantings shall be maximized within public access areas such as parks and along roadsides, and spacing shall be consistent with the street-tree requirements in the City's Urban Greening Master Plan.

4.3.6.1 Construction of the Bay Trail

This section includes mitigation measures that reduce environmental impacts of the development of the Bay Trail as a component of the Modified Project. The following mitigation measures are incorporated by reference from the Bay Trail IS/MND, as described in **Section 1.4.4**. For ease of reference, the following mitigation measures are numbered the same as found in the Bay Trail IS/MND.

- BIO-1 Prior to construction, EBRPD or a qualified botanist shall pin flag or mark locations of special-status plant species along the alignment. The Modified Project shall avoid impacts to special-status plant species where possible, however, where impacts cannot be avoided, plants shall be translocated or replanted in the Project Site vicinity or nearest suitable habitat. Prior to the initiation of construction, a qualified botanist shall conduct a focused survey for marsh gumplant and Suisun marsh aster within the construction

footprint during the appropriate blooming period (April through November). The survey shall be conducted in accordance with the CDFW's Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (CDFW, 2018b).

- BIO-2 If any construction activities (e.g., grubbing, grading, removal of one tree) are scheduled during the bird nesting season (typically defined by CDFW as February 1 to September 1), a qualified biologist shall conduct a pre-construction survey for nesting birds no more than 5 days prior to the start of work, or as otherwise specified by permit conditions. If the project is suspended and delayed for 10 or more days another nesting survey shall be conducted 2 days prior to resuming work. If the survey indicates the presence of nesting birds, a qualified biologist shall delineate a buffer zone where no construction may occur until the biologist has determined that all young have successfully fledged, or until otherwise approved by CDFW. The size of the buffer(s) shall be determined by the biologist in consultation with CDFW and be based on the nesting species and its sensitivity to disturbance.
- BIO-3 Prior to ground-disturbing activities, a biologist shall conduct visual pre-construction surveys for California Ridgway's (formerly Clapper) rail and California black rail within suitable habitat and surrounding areas. Suitable habitat on the Project Site is limited to marsh and mud flat areas near Castro Point. If the rails or other sensitive species are observed on or near the Project Site, the biologist shall establish buffers around which no disturbance can occur until the biologist determines a work can proceed within the area or the species do not occur within the area.
- BIO-4 Measures shall be taken to avoid impacts to monarch butterflies if present onsite. If eucalyptus trees at the northern end of the Bay Trail are proposed for removal, a biologist shall conduct a survey for monarch butterflies during the winter roosting season when monarch butterfly roosting colonies would be expected to occur (typically October to February). If present, an avoidance plan shall be developed by a biologist for implementation during construction. If monarch butterflies are present, grading, excavation, and eucalyptus tree removal shall be restricted from August 1 through March 31.
- BIO-5 After construction is complete, EBRPD or the construction contractor shall replant native trees and native shrubs in the immediate vicinity of the Project Site at a 3:1 mitigation ratio, or a replacement ratio as determined by regulatory agencies and specified in environmental permits obtained through the Joint Aquatic Resources Permit Application if it results in a greater number of replacement trees.
- BIO-6 During construction, the contractor shall avoid and minimize the spread of invasive or noxious weed species. Equipment shall be cleaned and free of weeds, and seeds prior to being used onsite. The EBRPD or a qualified contractor shall write a site-specific Invasive Plant Plan to specify implementation that shall avoid and minimize the introduction and spread of invasive plant species and seeds.

- BIO-7 To reduce potential short-term impacts to the upland wetland, the contractor shall implement the following avoidance measures and BMPs:
- Install temporary silt fencing beyond the outer edge of the wetland boundary to prevent entry of fill into the wetland during construction. Temporary silt fencing would also reduce the likelihood of wildlife from entering the work area.
 - Place temporary Environmentally Sensitive Area fencing where needed to prevent construction equipment and workers from entering the upland wetland.
- BIO-8 Fencing and other structures associated with development of the Bay Trail shall be designed and constructed in a manner that does not impede wildlife movement.
- BIO-9 The EBRPD or its construction contractor shall obtain a tree removal permit from the City superintendent, or equivalent, for removal or pruning of trees at least three days prior to when work shall occur. Proposed tree removal shall be completed within 30 days of obtaining the permit.
- BIO-10 The construction contractor shall be responsible for providing, installing, and maintaining tree and shrub protection in active work areas for the duration of construction.

4.4 CULTURAL RESOURCES AND TRIBAL CULTURAL RESOURCES

4.4.1 INTRODUCTION

This section provides a description of both cultural resources and tribal cultural resources on and in the vicinity of the Project Site and describes the changes to those conditions that would result from implementation of the Point Molate Mixed-Use Development Project (Modified Project). Following an overview of the relevant regulatory setting in **Section 4.4.2** and the environmental setting in **Section 4.4.3**, Modified Project-related impacts and identified mitigation measures are presented in **Section 4.4.7** and **Section 4.4.8**, respectively. The impacts on cultural resources and tribal cultural resources associated with the Casino Project analyzed as Alternative A in the *Final Environmental Impact Report for the Point Molate Mixed-Use Tribal Destination Resort and Casino Project* (2011 FEIR) are summarized in **Section 4.4.6** and compared to the impacts of the Modified Project.

4.4.2 REGULATORY SETTING

4.4.2.1 Federal

National Historic Preservation Act

Section 106 of the National Historic Preservation Act (NHPA) as amended, and its implementing regulations found in 36 Code of Federal Regulations (CFR) Part 800, require federal agencies to identify cultural resources that may be affected by actions involving federal lands, funds, or permitting. The significance of the resources must be evaluated using the criteria outlined in 36 CFR § 60.4, as described below.

If a resource is determined to be a historic property, Section 106 of the NHPA requires that effects of the federal undertaking on the resource be determined. A historic property is defined as:

...any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in the National Register of Historic Places, including artifacts, records, and material remains related to such a property (NHPA § 301[5]).

Section 106 of the NHPA prescribes specific criteria for determining whether a project would adversely affect a historic property, as defined in 36 CFR § 800.5. Section 800.5 provides the following definition of an adverse effect:

“An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property's eligibility for the National Register. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative.”

If the historic property would be adversely affected by development, then consultation must be pursued. The State Historic Preservation Officer (SHPO) and Tribal Historic Preservation Officer, when one exists, must be provided an opportunity to review and comment on these measures prior to implementation of a project.

National Register of Historic Places

The NHPA authorizes the Secretary to maintain and expand the NRHP as a national register of districts, sites, buildings, structures, and objects of significance in American history, architecture, archaeology, engineering, and culture. A property may be eligible for listing on the NRHP if it meets criteria for evaluation as defined in 36 CFR § 60.4, as explained below.

- A. Properties that are associated with events that have made a significant contribution to the broad patterns of our history
- B. Properties that are associated with the lives of persons significant in our past
- C. Properties that embody the distinctive characteristics of a type, period or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction
- D. Properties that have yielded, or may be likely to yield, information important in prehistory or history

Sites younger than 50 years, unless of exceptional importance, are not eligible for listing in the NRHP. In addition to meeting at least one of the criteria outlined above, the property must also retain enough integrity to enable it to convey its historic significance. The NRHP recognizes seven aspects or qualities that, in various combinations, define integrity. These seven elements of integrity are location, design, setting, materials, workmanship, feeling, and association. To retain integrity a property will always possess several, and usually most, of these aspects.

While most historic buildings and many historic archaeological properties are significant because of their association with important events, people, or styles (Criteria A, B, and C), the significance of most prehistoric and historic-period archaeological properties is usually assessed under Criterion D. This criterion stresses the importance of the information contained in an archaeological site, rather than its intrinsic value as a surviving example of a type or its historical association with an important person or event. It places importance not on physical appearance, but rather on information potential.

Native American Graves Protection and Repatriation Act

The Native American Graves Protection and Repatriation Act (NAGPRA) is a federal law passed in 1990. NAGPRA provides a process for museums and federal agencies to return certain Native American cultural items – human remains, funerary objects, sacred objects, or objects of cultural patrimony – to lineal descendants, and culturally affiliated Indian tribes and Native Hawaiian organizations. NAGPRA includes provisions for unclaimed and culturally unidentifiable Native American cultural items, intentional and inadvertent discovery of Native American burials and cultural items on federal and tribal lands, and penalties for noncompliance and illegal trafficking.

4.4.2.2 State

The State of California implements the NHPA of 1966, as amended, through its statewide comprehensive cultural resource surveys and preservation programs. The California Office of Historic Preservation (OHP), as an office of the California Department of Parks and Recreation, implements the policies of the NHPA at the statewide level. The OHP also maintains the California Historical Resources Inventory. The SHPO is an appointed official who implements historic preservation programs within state jurisdiction.

California Environmental Quality Act

The California Environmental Quality Act (CEQA), as codified in Public Resources Code (PRC) § 21000 et seq., is the principal statute governing the environmental review of projects in California. CEQA requires Lead Agencies to determine if a proposed project would have a significant effect on historical resources, including archaeological resources. The CEQA Guidelines define a historical resource as: (1) a resource listed in or eligible for listing in the California Register of Historical Resources (CRHR); (2) a resource included in a local register of historical resources, as defined in PRC § 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC § 5024.1(g); or (3) any object, building, structure, site, area, place, record, or manuscript that a Lead Agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, provided the determination of the Lead Agency is supported by substantial evidence in light of the whole record.

If a Lead Agency determines that an archaeological site is a historical resource, the provisions of PRC § 21084.1 and CEQA Guidelines § 15064.5 would apply. If an archaeological site does not meet the CEQA Guidelines criteria for a historical resource, then the site may meet the threshold of PRC § 21083 regarding unique archaeological resources that are defined as “an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- 1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;
- 2) Has a special and particular quality such as being the oldest of its type or the best available example of its type; or
- 3) Is directly associated with a scientifically recognized important prehistoric or historic event or person (PRC § 21083.2 [g]).”

The CEQA Guidelines state that if a resource is neither a unique archaeological resource nor a historical resource, the effects of the project on that resource shall not be considered a significant effect on the environment (CEQA Guidelines § 15064[c][4]).

California Register of Historical Resources

The CRHR is “an authoritative listing and guide to be used by state and local agencies, private groups, and citizens in identifying the existing historical resources of the state and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change” (PRC § 5024.1[a]). The criteria for eligibility to the CRHR are similar to NRHP criteria (PRC § 5024.1[b]).

Certain resources are, by statute, automatically included in the CRHR, including California properties formally determined eligible for or listed in the NRHP.

To be eligible for the CRHR, a historical resource must be significant at the local, state, and/or federal level under one or more of the following criteria (PRC § 5024.1[c]).

- 1) The historical resource is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
- 2) The historical resource is associated with the lives of persons important in our past.
- 3) The historical resource embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
- 4) The historical resource has yielded, or may be likely to yield, information important in prehistory or history.

For a resource to be eligible for the CRHR, it must also retain enough integrity to be recognizable as a historical resource and to convey its significance, and be 50 years or older except where it can be demonstrated that sufficient time has passed to understand the historical importance of the resource.

California Health and Safety Code

California Health and Safety Code (HSC) § 7050.5 states that "Every person who knowingly mutilates or disinters, wantonly disturbs, or willfully removes any human remains in or from any location other than a dedicated cemetery without authority of law is guilty of a misdemeanor, except as provided in Section 5097.99 of the Public Resources Code." HSC § 7050.5 requires that in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined, in accordance with Chapter 10 (commencing with Section 27460) of Part 3 of Division 2 of Title 3 of the Government Code, that the remains are not subject to the provisions of Section 27491 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the PRC. The coroner shall make his or her determination within two working days from the time the person responsible for the excavation, or his or her authorized representative, notifies the coroner of the discovery or recognition of the human remains. If the coroner determines that the remains are not subject to his or her authority and if the coroner recognizes the human remains to be those of a Native American, or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission (NAHC). PRC § 5097.98 requires compliance with HSC § 7050.5, and provides some additional detail about discussing the appropriate reinternment of remains with descendants. Compliance with the measures outlined in HSC § 7050.5 and PRC § 5097.98 prevent significant impacts in the event of an accidental discovery of human remains during excavation activities.

Senate Bill 18

Senate Bill (SB) 18 requires cities and counties to notify and consult with Native American Tribes in California about proposed local land use planning decisions for the purpose of protecting tribal cultural resources. SB 18 requires cities and counties to send any proposals for revisions or amendments to general plans and specific plans to those California Native American Tribes within California that are on the NAHC contact list and have traditional lands located within city or county jurisdiction. If requested by a tribe on the NAHC contact list, cities and counties must conduct consultations with the requesting tribes prior to adopting or amending their general plans or specific plans.

Assembly Bill 52

Assembly Bill (AB) 52 requires Lead Agencies to notify California Native American tribes that have requested such notification of any Notice of Preparation (NOP) for an Environmental Impact Report (EIR) and any Notice of Intent (NOI) to prepare a negative declaration (including a mitigated negative declaration) when those documents become available, as long as the decision to prepare the EIR or negative declaration was made after July 1, 2015. Tribes can respond to such notice and request consultation. If consultation is requested, it must occur early in the CEQA process. The bill establishes a new category of Tribal Cultural Resources (TCR) and recognizes that California Native American tribes traditionally and culturally affiliated with a geographic area may have expertise concerning their TCRs. TCRs are a site feature, place, cultural landscape, sacred place, or object with cultural value to a California Native American tribe that are included or determined to be eligible for inclusion in the CRHR, included in a local register of historical resources as defined in PRC § 5020.1(k), or a resource determined by the Lead Agency, in its discretion and supported by substantial evidence, to be significant pursuant to the criteria in PRC § 5024.1(k). A cultural landscape that meets the criteria to be a TCR is also a TCR to the extent that the landscape is geographically defined in terms of its size and scope. Similarly, a historical resource, unique archaeological resource, or non-unique archeological resources also can be a TCR if it meets the requirements to be a TCR. Significant impacts to a TCR are considered significant effects on the environment.

4.4.2.3 Local***City of Richmond General Plan 2030***

The City's General Plan 2030 (General Plan) contains the following goals related to historic resources.

GOAL HR1 Historic Resource Preservation. The City has a rich history that is woven throughout the fabric of the community. Preserve historic resources and leverage them to enhance and build upon the historic character of the City.

GOAL HR2 Expanded Economic Opportunities Based on Historic Resources. In addition to serving as a source of community pride, historic resources play a role in attracting visitors to the area and strengthening the economic position of the City. Take advantage of these historic and cultural resources by promoting them as visitor destinations. Draw on the heritage of the City as a tool for economic revitalization and enhancement of community identity.

GOAL HR3 Increased Public Awareness of City History. The value of historic resources relies on an adequate level of community awareness. Raise public awareness by educating the public about the City history, how it has shaped the City in the modern-day, and how residents can identify and preserve historically significant properties. With a better understanding of these resources, it is likely that residents will play a stronger role in caring for historic resources located within the City.

Historic Structures Code

The Historic Preservation Commission (HPC) for the City of Richmond (City) implements the City's Historic Structures Code (Chapter 6.06 - HISTORIC STRUCTURES CODE) and functions as the decision-making body for the design of new development projects in historic districts and major alterations to historic or potentially historic resources identified in the PRISM survey. The HPC also nominates properties for historic designation and conducts historic resource surveys and studies. Organizationally, the HPC is staffed by the Richmond Planning Division and advises the City Council on projects that lie within its purview. The Historic Structures Code provides for the identification, protection, enhancement, perpetuation, and use of improvements, buildings, structures, signs, features, sites, places, and areas within the City that reflect key elements of the historical, architectural, archaeological, cultural, or aesthetic heritage of the City. Goals of the Historic Structures Code include encouraging public knowledge, understanding, appreciation, and use of the past in the City; enhancing the visual character of the City by encouraging new design and construction that complement the historical buildings; and increasing the economic benefits of historic preservation to the City and its inhabitants.

Standards for Preservation & Guidelines for Preserving Historic Buildings

The City's Historic Structures Code § 6.06.072 (a) required that the HPC promulgate and publish standards to be approved by the City Council by resolution. The Standards for Preservation & Guidelines for Preserving Historic Buildings provide these standards (City of Richmond, 2019f).

Richmond Historic Register

The City of Richmond has a local Historic Register, which is a list of designated historic resources in the City. The City's Historic Structures Code defines a historic resource as any building, structure, sign, feature, site, place, area, or other improvement of scientific, aesthetic, educational, cultural, archaeological, architectural, or historical value to citizens of the City and designated as such by the Richmond City Council. Historic resources also include historic landmarks and contributing structures in historic districts.

Zoning Ordinance

The City of Richmond Zoning Ordinance also contains regulations for Historic Districts and Landmark Overlay Districts (Richmond Municipal Code [RMC] § 15.04.303). The Zoning Ordinance specifically lists Winehaven as a City Historic District. (RMC § 15.04.303.020). The Modified Project would include an H-district overlay in its Planned Area Development plan for the Winehaven District. The following applicable RMC sections protect the City's historic resources:

15.04.303.120 - Certificates of Appropriateness.

A certificate of appropriateness shall be required prior to development, exterior alteration, restoration, rehabilitation, or relocation of any structure in an -H district or subject to an -L designation.

A. Authority. The HPC shall have the authority to review and approve, approve with conditions, or reject a certificate of appropriateness pursuant to the procedures and criteria in this section.

B. Exemptions. No certificate of appropriateness is required for ordinary maintenance; interior modifications; work pre-approved in a Mills Act contract; and any development, alteration, restoration, rehabilitation, or relocation that is not specifically described in an application for Historic District designation or Landmark designation or in a Mills Act contract application as having historical or architectural value. However, Zoning Administrator review is required to confirm whether an exemption is warranted.

C. Criteria. To approve an application for a certificate of appropriateness, the HPC or the Zoning Administrator in the case of minor alterations and additions shall find that the proposed work conforms to the Secretary of the Interior's Standards for the Treatment of Historic Properties and more specifically:

- 1. Whether the proposed construction, reconstruction, or relocation is appropriate and consistent with this section and, if applicable, the Historic Conservation Plan for the historic district.
- 2. Whether the applicant has demonstrated that every reasonable effort will be made to minimize alteration of any contributory structure or designated landmark and preserve its integrity.
- 3. With regard to any property located within an historic district but which is not a contributing structure, the proposed work does not adversely affect the character and integrity of the district.
- 4. Whether the distinguishing original qualities or character of a contributory building, structure, or object, or site and its environment will not be destroyed, and the removal or alteration of any historic material or distinctive architectural feature will be avoided, to the greatest extent reasonably practical.
- 5. Whether changes which may have taken place in the course of time are evidence of the history and development of a contributory structure or site and its environment and that such changes which may have acquired significance in their own right, will be recognized and respected.
- 6. Whether distinctive stylistic features or examples of skilled craftsmanship which characterize a structure or site will be retained, to the extent reasonably possible.
- 7. Whether any proposed project will have a minimal impact on any significant historical, architectural, or cultural material, and will be compatible with the size, scale, color, material, and character of the property, neighborhood, or environment.
- 8. Whether additions or alterations to contributory buildings, structures, objects or sites or designated landmarks will be done in a manner that, if such additions or alterations were to be removed in the future, the essential form and integrity of the building, structure, object, or site would be unimpaired.

D. Conditions. The Zoning Administrator may recommend, and the HPC may impose, all reasonable conditions to ensure compliance with the Historic Conservation Plan or maintain the integrity of the Landmark.

E. Amendment to Certificate of Appropriateness. A certificate of appropriateness may be amended, extended, or modified at any time over the life of the building, only in accord with the procedures and criteria established for its original approval.

15.04.303.130 - Demolition Permits.

A demolition permit is required for any structure subject to an -H or -L overlay district designation, listed in the Richmond Historic Register, or Federal, State register and any building, structure, or object more than 45 years old or older. The decision to issue a permit to demolish a building, structure, or object or alter a site subject to an -H or -L overlay district or listed in the Richmond Register is discretionary, subject to review under CEQA.

A. Application for a Demolition Permit. An application for a permit to demolish a building, structure, or object not listed in the Richmond Historic Register but is 50 years old or older shall include an eligibility evaluation on DPR523 series forms, as necessary, provided by the California Office of Historic Preservation (OHP), and prepared according to "Instructions for Recording Historic Resources" provided by the California Office of Historic Preservation. Based on an initial review of the form, the Zoning Administrator shall render an opinion within 30 days on whether the structure is eligible for listing as a historic resource.

B. Referral to HPC. If a structure is eligible for listing as a historic resource, the Zoning Administrator shall refer the matter to the HPC. The HPC shall review the completed DPR523 series form, and the Zoning Administrator's opinion, and determine whether the structure is eligible for individual listing or as a contributing element to a -H Historic Overlay District on the National Register of Historic Places, the California Register of Historic Resources or Richmond Historic Register. If the HPC's determination conflicts with the opinion of the Zoning Administrator, the City Council shall resolve the conflict and determine the final opinion.

- 1. If the determination is negative, no other action is required by the applicant.
- 2. If the opinion is positive, then the applicant shall submit a DPR523 series form completed and signed by an individual meeting the U.S. Secretary of the Interior's professional qualification standards for history or architectural history and the Director of Planning and Building Services, or his or her designee, shall refer the matter to Historic Preservation Commission. The Commission shall review the completed DPR523 series form and determine if the structure is eligible for listing individually or as a contributing structure in a historic district on the National Register of Historic Places, the California Register of Historic Resources or Richmond Historic Register.
- 3. If the building, structure, or object is determined to be eligible for listing either individually or as a contributing element, a Certificate of Appropriateness shall be required.
- 4. An eligibility determination for listing in the Richmond Historic Register may be appealed to the City Council. An eligibility determination for listing in the National Register of Historic Places or the California Register of Historic Resources may be appealed only to the State Historic Preservation Office.

C. Exceptions.

- 1. A demolition permit for any property within the area covered by the Project PRISM Historic Resource Survey Report shall not be discretionary or require a Certificate of Appropriateness

unless the property is listed in the Project PRISM Historic Resource Survey Report as a potential historic resource on the National, California or Richmond Register.

- 2. Unless exempt from permit requirements by other laws or codes, a demolition permit shall be ministerial for the demolition of process equipment, goods movement equipment and facilities, and construction installations, as these are defined in this chapter.

4.4.3 ENVIRONMENTAL SETTING

Information provided in this section is derived from a number of sources including U.S. Geological Survey (USGS) maps and publications, two cultural resources reports finalized in 2010 and 2011, historical architecture studies performed in 1995 and 1996 (Appendices N and Y of 2011 FEIR), and a historical architecture study performed in 2019. This analysis focuses on the manner in which the Modified Project would alter the Project Site under baseline conditions, which are defined for the purposes of the analysis in this section as physical conditions on or around the publication of the NOP in July 2019.

4.4.3.1 Prehistoric Setting

An analytic framework for the interpretation of the prehistory of the Contra Costa County (County) is provided by Fredrickson (1973, 1974), who divided human history in California into three broad periods: the Paleoindian period, the Archaic period, and the Emergent period. This scheme used sociopolitical complexity, trade networks, population, and artifact types to differentiate between cultural units; although several refinements have been proposed, the scheme remains the dominant framework for prehistoric archaeological research in the San Francisco Bay (Bay) region.

The Paleoindian period (12,000 to 8,000 years before present [B.P.]) was characterized by small, highly mobile groups occupying broad geographic areas. During the Archaic period, consisting of the Lower Archaic period (8,000 to 5,000 B.P.), Middle Archaic period (5,000 to 3,000 B.P.), and Upper Archaic period (3,000 B.P. to Anno Domini [A.D.] 500), geographic mobility may have continued, but groups began to establish longer-term base camps in localities from which a more diverse range of resources could be exploited. The addition of milling tools and concave-base points, as well as the occurrence of sites in a wider range of environments, suggest that the economic base was becoming more diverse. By the Upper Archaic period, mobility was being replaced by a more sedentary adaptation in the development of numerous small villages, and the beginnings of a more complex society and economy began to emerge. During the Emergent period (A.D. 500 to historic contact), social complexity developed toward the ethnographic pattern of large, central villages where political leaders resided, with associated hamlets and specialized activity sites. Artifacts associated with the Emergent period include the bow and arrow, small corner-notched points, mortars and pestles, and a diversity of beads and ornaments.

The first intensive survey of archaeological sites in the Bay Area was conducted by N.C. Nelson between 1906 and 1908. Nelson explored the Bay shoreline, including the Point Molate area, where he documented 425 shell mounds and was the first to recognize the Bay Area as a discrete archaeological entity (Moratto, 1984:227). In December of 1907, Nelson recorded five sites along the California coast from Castro Point north to Point San Pablo, including shell mounds located within the Project Site.

The geographic distribution of the various Native American groups occupying California in the distant past has been the subject of anthropological inquiry for many years (Dixon and Kroeber, 1919; Moratto, 1984). It is widely recognized that ancestors of the Costanoan groups, who historically occupied the vicinity of the Modified Project, moved into the Bay Area during the Archaic period, most likely expanding out of the Sacramento – San Joaquin delta region (Levy, 1978). Levy (1978:486) suggests that this emigration into the eastern Bay Area occurred circa 1,500 B.P., while Moratto (1984:554) argues that it may have occurred as early as 3,500 B.P. Remarking on this expansion of territory, Levy (1978:486) states, “Linguistic evidence indicates that [proto-Costanoan] were then in contact with speakers of a Hokan language that shared vocabulary with ancestral Pomoan and Esselen. This long-extinct Hokan language probably occupied at least a portion of the territory into which the Costanoan expanded.”

Costanoan, or Ohlone, is a linguistic designation for a family of eight languages that were spoken by approximately 50 autonomous groups occupying land from the Carquinez Straight in the County south into Monterey County. Each group had one or more permanent village sites with an average population of 200 people. More specifically, the Project Site is within an area attributed to the Huchiun Costanoan (Milliken, 1995:229). “The Huchiun lands seem to have extended over a large area along the East Bay shore, from Temescal Creek opposite the Golden Gate north at least to the lower San Pablo and Wildcat Creek drainages in the present area of Richmond” (Milliken, 1995:243).

The Project Site was originally almost an island, with open water to the west and marshlands to the east, between what are now Point Molate and the City. The area was likely used by native people from all around the northern Bay Area, as it offered a combination of environments in close proximity to each other. Remarking on the lack of defined territory within the waters near the Project Site, Barrett (1908:307) states that, “There is no definite knowledge obtainable concerning fishing and other rights on the waters of San Francisco and San Pablo Bays, but from all that can be gathered it seems probable that these were neutral grounds and that the Indians of the region all had equal rights in these waters off shore.”

4.4.3.2 Historic Setting

Spanish Period

In 1772, the first recorded contact with the Huchiun occurred at the Richmond Wildcat Creek Village during the Spanish expedition by Lt. Pedro Fages and Father Juan Crespi, who were trying to find a land route to the Point Reyes area from the South Bay region. During the expedition, Pedro Fages drew a map of the Richmond Peninsula (San Pablo Peninsula), which at the time he believed was an island due to extensive marshlands to the east and southeast (Banks and Orlins, 1981).

Seven missions were established in the region between 1770 and 1823. The Huchiun, like most of the Costanoan-speaking groups in the region, were relocated to Mission San Jose and Mission San Francisco (Dolores) between the years 1802 and 1805. Missionization, disease, and displacement severely impacted all Costanoan people; as a result, the language was functionally extinct by circa 1935 (Levy, 1978:486-487).

Mexican Period

Secularization of the California missions was initiated in 1813, and formally declared in 1821. That same year, Mexican forces prevailed in their struggle for independence and declared California to be part of the Mexican empire. This event marked the beginning of the short-lived Mexican Period in California history, when mission lands were divided among Californians as land grants. The grants, known as ranchos, enriched those individuals fortunate enough to receive one, while effectively subjugating the native tribes as an indentured labor force.

Until the secularization of the missions, the Franciscan fathers at Mission San Francisco (Dolores) held claim to the San Ysidro de Los Juchiunes outpost, using it for pasturage. Francisco Maria Castro filed a petition for the land that comprised San Ysidro de Los Juchiunes in 1817, which was granted in 1823. Father Altimira, with the permission of the Mexican authorities in San Jose (but without permission from his superior), granted Castro's grant application that included land held in trust by the Mission for the local Indians. This land grant was first called El Rancho de Los Cuchinyunes [Huchiun] and later became known as Rancho San Pablo. Rancho San Pablo consisted of five square leagues or approximately 13 square miles. It adjoined the Peralta Grant on the north and roughly embraced what are now the towns of El Cerrito, Kensington, and a large part of the present-day City, including the Project Site. Castro raised cattle for the hide and tallow trade and planted the first fruit trees and grape cuttings provided by the mission (Hoover et al., 2002). At his death in 1831, Castro left half of the rancho to his wife and the other half to his 10 children, and his family continued to graze cattle.

American Period

The Bay Area and the City of San Francisco in particular, underwent significant transformation after gold was discovered at Coloma in 1848. At the time of the discovery, San Francisco had a population of about 500 to 600, but by the end of the next year it had increased to nearly 25,000 (Wollenberg, 2002). San Francisco had become an urban center, as well as a center of influence over the social and economic affairs of much of the American west. This influence affected the East Bay region as well, including the Castro land grant.

The U.S. Government recognized Castro's land patent in 1873; however, due to land disputes by people who had settled on the rancho in the intervening years, the expense involved in having the patent confirmed, and infighting among Castro's heirs, the rancho was subdivided in 1893 into 200 parcels. The Project Site includes two of these parcels, one held by A. Maraschi and the other by Richard O'Neil.

Chinese Shrimp Camp

In the decade following the admission of California to the United States in 1850, the population of the Bay Area grew rapidly, resulting in increased demand on the food supply. One result was the establishment of at least four Chinese shrimp camps—including one on the Point Molate Site—owned by the Union Shrimp Company beginning sometime between 1865 and 1870.

By 1904, the Point Molate shrimp camp consisted of about 30 shacks, five wharfs, and 10 boats. The boats measured approximately 40 feet by 10 feet and had 30-foot masts with Chinese square sails. Chinese fishermen were a familiar sight in Point Richmond as they peddled shrimp carried in wicker

baskets located at the ends of 10-foot poles balanced across their shoulders (Analytical Environmental Services [AES], 2011).

The period between 1884 and 1900 witnessed a campaign by the California State Commission on Fisheries to force Chinese shrimp fishermen out of business. Efforts to severely restrict the burgeoning Chinese fishing industry included intimidation and the imposition of race-based taxes. In 1901, a law was passed forbidding shrimp fishing during the height of the season (May through August). Exportation of shrimp was banned in 1905, and finally, bag nets were outlawed in 1911, marking the death knell for the Chinese shrimp industry in the Bay Area (Ellinger, 2002). While the Point Molate shrimp camp was reportedly abandoned by 1912, the settlement still appears on the 1915 San Francisco USGS 15' quadrangle, with 18 structures west of Stenmark Drive and four short wharfs extending into the Bay.

Winehaven

Seven of the top wine producers in California consolidated in 1894 forming the California Wine Association (CAWA), which proved to be the dominant force in the western wine industry until the start of prohibition (AES, 2010). The CAWA had offices and wineries at numerous domestic and foreign ports and centers of commerce. In 1902, the 50+ wineries in the CAWA produced nearly 30,000,000 gallons of wine from over 225,000 tons of grapes.

By 1906, the City of San Francisco shipped more wine than any other part of California. The giant San Francisco wine houses that united as the CAWA shared trade with numerous large and medium wine producers and family-owned cellars throughout California, but the catastrophic earthquake and fire of 1906 destroyed virtually all of the extensive CAWA wine storage facilities. Millions of gallons of cooperage (valued at \$500,000 dollars) were lost. Despite the losses associated with the earthquake and fire, the CAWA had more than \$8,100,000 in assets, which included a vast inventory of wine, valued at more than \$2,000,000 (AES, 2010).

The President of CAWA, Percy Morgan, envisioned the consolidation of the seven San Francisco depots under one roof. In late 1906, the CAWA purchased 47 acres on the eastern shore of the Bay on the north side of Point Molate. Work soon began on the last and greatest enterprise of CAWA—a complex for wine production, storage, and distribution named Winehaven. Construction was undertaken for two immense buildings needed for wine production and storage, a hotel/boarding house for 100 employees, a power house, a firehouse, a bottling plant, a laboratory, cooperage shops, and other utility buildings. Thirty-five of the original Winehaven buildings survive today, and are included in the Winehaven Historic District (Historic District; CA-CCO-422H). **Table 4.4-1** summarizes the historic uses of the contributing elements of the District. **Figure 4.4-1** shows the contributing and non-contributing buildings and other features within the District.

The dominant Winehaven structure is a three-story brick fortress-like wine storage cellar (Building No. 1), measuring 800 by 185 feet. It is architecturally dramatic with round corner turrets, windows with hood molds, and castellated parapets; its image is reflective of a European castle. The foundation and basement were constructed of reinforced concrete to counteract potential earthquake damage. A fermenting cellar (Building No. 6) was located just south of the wine cellar (Building No. 1), measuring 600 by 150 feet, with an annual crushing capacity of 25,000 tons.

TABLE 4.4-1
SUMMARY OF CONTRIBUTING BUILDINGS OF WINEHAVEN HISTORIC DISTRICT

Structure	Historic Use
Building No. 1	Wine Cellar/Storage
Building No. 6	Wine Cellar
Building No. 10	Warehouse and Loading Dock
Building No. 13	Power House
Building No. 17	Work Shop/Storage
Building Nos. 31–54	Cottages
Building Nos. 55–59	Cottages
Building No. 60	Winemaker's Residence
Building No. 63	Storage/Fire Station

The winery eventually had a storage capacity of 10,000,000 gallons of wine, including 3,000 barrels for aging wine and roughly 15 million bottles in stock at any given time (AES, 2010). A wharf, extending 1,800 feet into deep water, was built immediately west of Buildings No. 1 and No. 6 to load and unload ocean-going ships, as well as riverboats from the interior of northern California. Winehaven had its own electric switching engine to move freight cars up and down the pier and around the property and an internal railroad system serving loading docks at Building Nos. 1, 6, and 10. The Winehaven Internal Railroad is a standard-gauge line laid at ground level. Historically, the line ran on both the east and west sides of Building Nos. 1 and 10, as well as on the east side of Building No. 6, and was used to move raw materials and finished product within the complex, to the wharf, and to the Richmond Belt Line Railroad for shipment. Segments of intact railroad remain, while others have been cemented over or removed completely (JRP Historical Consulting Services [JRP], 2019; **Appendix Q**). Winehaven could ship 500,000 gallons of wine per month. Some 40 loaded ships sailed for New York alone each year (AES, 2010).

The CAWA bought a steamboat and anchored it in the Bay to provide the builders of the complex with housing. The first non-winery building constructed was the 29-room hotel that also provided housing for married workers and their families. By September of 1907, the fermentation facility (Building No. 6) was ready for a small crush. By 1908, 4,500 tons of grapes were being crushed to produce 675,000 gallons of wine. The capacity of the winery and its ready access encouraged farmers and growers to expand their vineyards. The railroads added two special freight trains per week to handle the volume of grapes coming in from the Central Valley.

Figure 4.4-2 depicts the facility as it appeared in 1908. Building No. 6 is visible on the right side of the frame, with numerous casks stacked outside. Building No. 1 is under construction, however the power house (Building No. 13) and wharf both appear to be complete and in use.

Considering the volume of wine being produced at Winehaven, it is likely that the majority of the complex was completed and in operation by the end of 1908. It is certain that construction was complete by 1909, when the structures are depicted on a Sanborn Fire Insurance Map. Of the buildings in existence today, Building No. 6 was still in its first phase of development, but the brick storage facility (Building No. 1, without the northern extension), power house (Building No. 13), work shop & storage (No. 17), and three

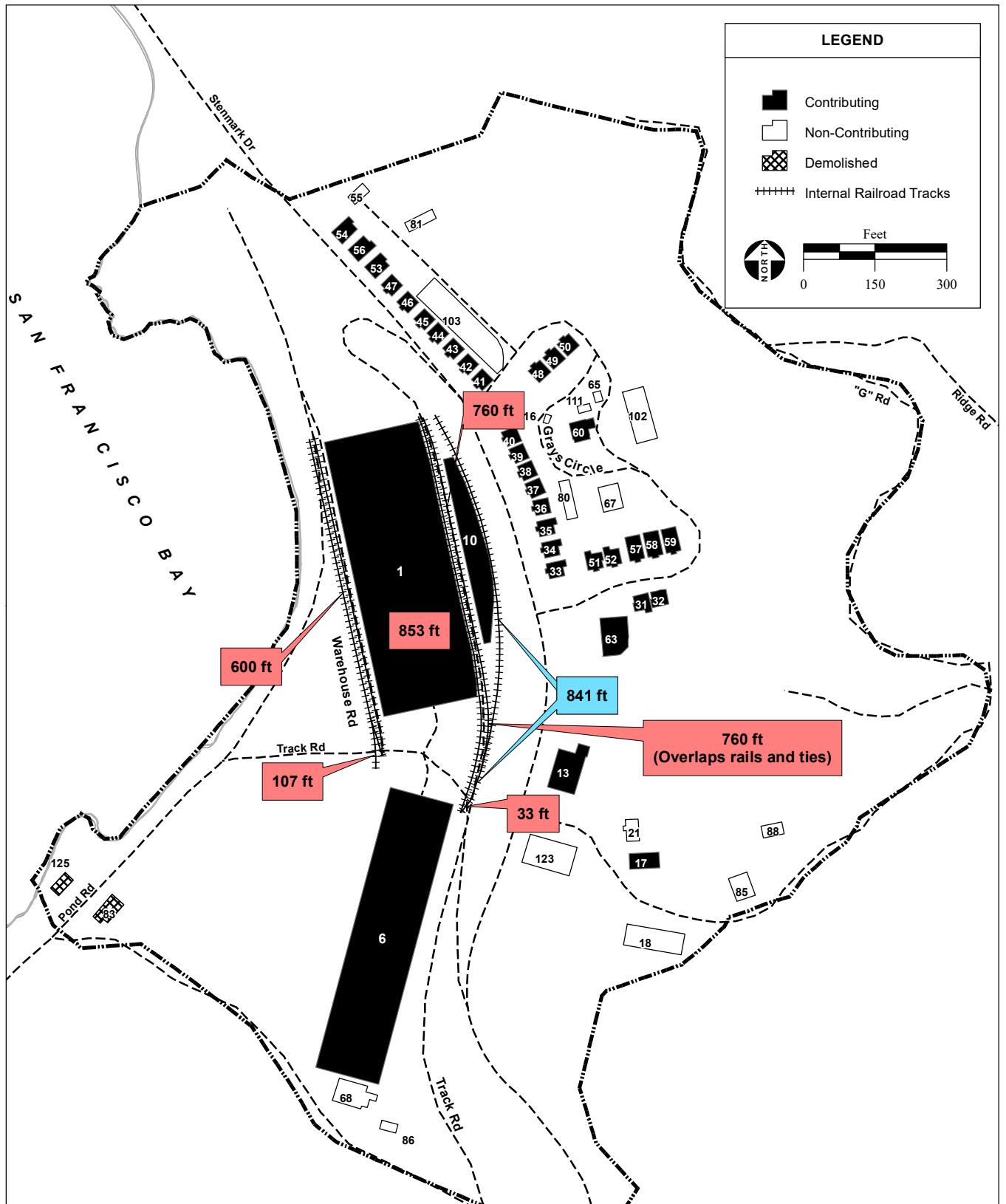


Figure 4.4-1
Winehaven NRHP District Cultural Resources

portions of Building No. 10 were all completed and shown on the map, though none of the cottages appear on the 1909 Sanborn Fire Insurance Map. Historic photographs dated 1909, that are on file at the California State Library, do not depict the cottages, with perhaps the exception of the large winemaker's house. This suggests that the cottages were built sometime between 1909 and 1916.

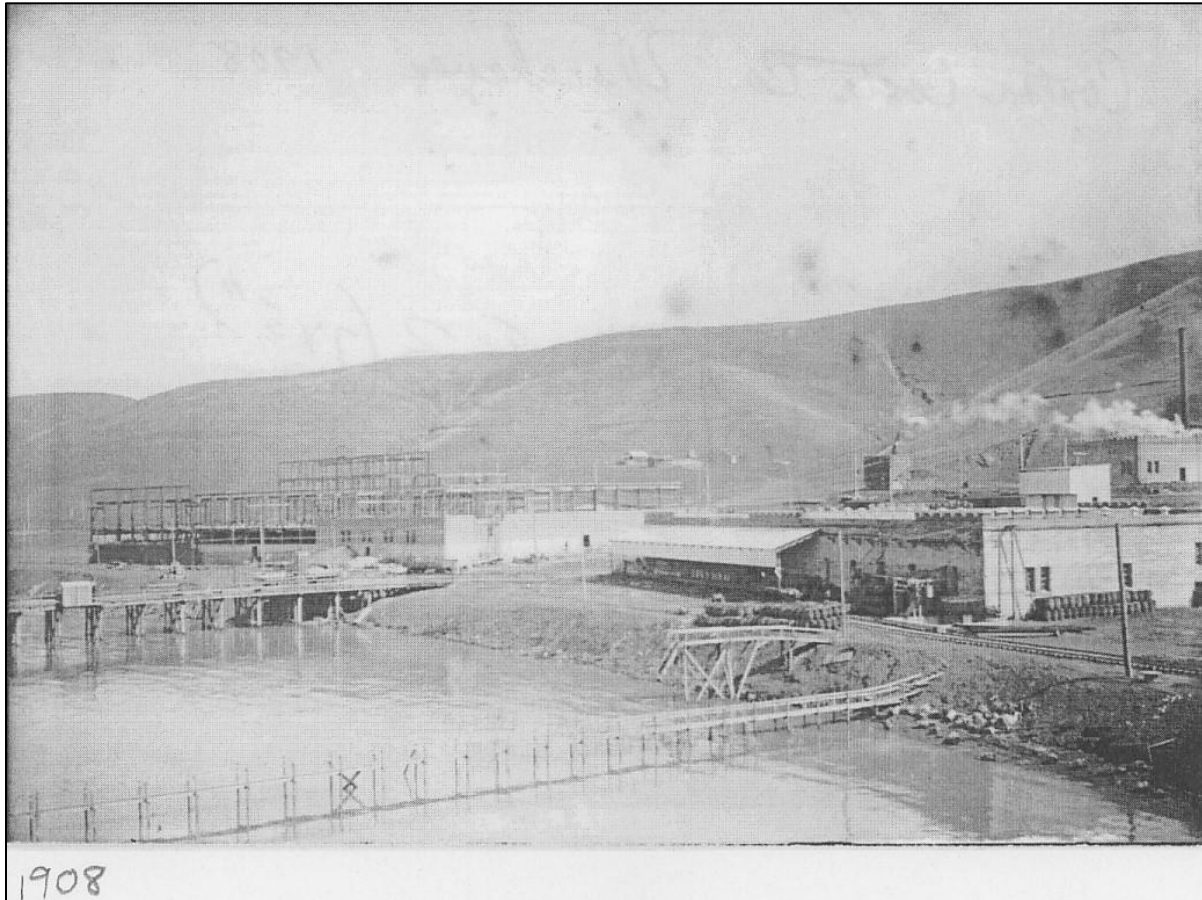


Figure 4.4-2 Winehaven during construction (1908) – View North

Figure 4.4-3 depicts Winehaven as it appeared circa 1918. As the numerous rail cars, loaded with large redwood casks, sit on the tracks of the internal railroad next to Building No. 6 show, the CAWA supported wine production and shipping by developing an internal railway system, which it began in 1907. The castle-like Building No. 1 is located in the distance. Winehaven's wharf is visible on the left, between the two large buildings. The smokestack of the power house (Building No. 13) is visible to the right, and the cottages are depicted in the upper right portion of the frame.

In 1911, a new trolley switching system was installed for the internal railway system. Ten new five-room cottages were built, along with a social hall and a school house for children of the employees. In early 1913, new improvements were made that included additions to the fermenting and storage facilities. Space for an additional 1.5 million gallons of wine was completed on the lower floor of Building No. 6 and the upper floor fermenting room was increased by two million gallons, all at a cost of \$500,000. With new

crushers in the expanded fermenting room and increased storage space, Winehaven could handle and ship one million gallons of bulk wine per month (AES, 2010).



Figure 4.4-3 View of Winehaven circa 1918 – View North

By the time the 1916 Sanborn Map Book was issued, Building No. 6 had been fully built out to its current extent and additional cottages had been constructed. The Fresno Warehouse for wooden barrels had been added, in addition to a small extension for barrel storage and shipping, all of which were located to the north of Building No. 1. The extension of Building No. 1 was completed prior to 1918 (within the period of significance) as it can be seen in **Figure 4.4-3**. An interesting note to the 1916 map was that the Bottling Plant, that used to stand across Western Drive (now Stenmark Drive) from Building No. 6, was labeled *Grape Juice Plant*. This is an indication that CAWA was starting to react to the increasing popularity of prohibition and was attempting to develop and market non-alcoholic beverages.

By 1917, as states began to ratify the Eighteenth Amendment to the Constitution, the market for alcoholic beverages shrank and business began to slow. Some subsidiary companies of CAWA were dissolved and others were consolidated. Some wineries in CAWA were sold and plans were made to convert the vineyards to other uses. Anticipating passage of the Volstead Act in 1919, which would enable federal enforcement of the Eighteenth Amendment, Winehaven produced two million gallons of grape juice. In 1920, the CAWA added a cold storage unit to Building No. 6 to house the grape juice.

After January 16, 1920, CAWA could no longer sell wine except for medicinal and sacramental use. Throughout the early years of prohibition, Winehaven did what it could to stay in business. In 1920, the Fresno Cooperage was moved to Winehaven and was installed in an expanded version of the Fresno Warehouse as the production and sale of wooden barrels was still a viable business. By early 1920, the CAWA was producing 1,000 barrels a day. However, by the mid-1920s, all production had ceased at Winehaven and the buildings were vacated.

The CAWA had to wait until 1941 to find a buyer for Winehaven, when Hiller Industries of San Francisco purchased the site for \$250,000. Hiller Industries planned to rehabilitate the buildings and establish an industrial wartime defense complex. The U.S. Navy (Navy) stepped in soon thereafter and took possession of the facility to use as a fuel depot.

Naval Fuel Depot

On February 1, 1941, the Pacific Fleet established its headquarters at Pearl Harbor and Winehaven was acquired and modified for use as a fuel depot. That same year, the Japanese attacked Pearl Harbor and drew the United States into World War II. As a fuel depot supporting the Pacific Fleet, the Point Molate Naval Fuel Depot (NFD) quickly became invaluable. The Navy built a new pier at Point Molate that extended a considerable distance into the Bay. The old wharf used by Winehaven last appears on the 1947 San Quentin 7.5' quadrangle, though it was fragmented and no longer connected to the shoreline. The Winehaven Hotel was used by the Navy as barracks and a mess hall, while the cottages were used as housing and the NFD commander occupied the winemaster's house.

The Navy began to burrow into the hillsides to hide large fuel and oil storage tanks. By 1944, the Navy had built 43 underground storage tanks and 32 aboveground storage tanks. Building Nos. 1 and 6 were used to store 55-gallon drums. Between 1949 and 1960, the Navy demolished several buildings, including two large-frame industrial buildings and the schoolhouse. The Winehaven hotel and the administration building burned down in 1967 and most historical records were lost. The NFD administration building was located at the current site of Building No. 123.

Following the end of World War II, activity at the NFD began to slow down. At various times the U.S. Government discussed closing the facility, but the Korean War in the early 1950s and the Vietnam War in the mid-1960s to mid-1970s kept the NFD active.

Richmond Belt Line Railway and San Pablo Quarries Company

The Richmond Belt Line Railway was established in 1902 by Colonel William S. Rheem to serve the Standard Oil Refinery (now Chevron®). In 1908, the manager of the Richmond Belt Line Railway announced that additional spur lines were being added to connect to Winehaven to handle the volume of material entering and exiting the facility. The railroad began in Richmond and followed the shoreline of Point San Pablo toward and beyond Point Molate. The line connected with the Atchison, Topeka & Santa Fe Railway, and Southern Pacific Railroad main lines in Richmond and provided service to numerous industries along its run, including several quarries. The Richmond Belt Line Railway passed through the main section of the Winehaven property (**Figure 4.4-1**) on top of the cut bank above and to the east of Building Nos. 1, 6, and 10 (along the telephone pole line visible east of Building No. 6 in **Figure 4.4-3**) without making direct connections with those warehouses.

Richmond-San Rafael Ferry and Transportation Company (1924 – 1956)

Charles Van Damme founded the Richmond-San Rafael Ferry and Transportation Company in 1915. The ferry service ran between the former Pacific Coast wharf at Point San Quentin on the Marin County side, to a wharf located at Point Castro. The Richmond Belt Line Railway constructed 3 miles of new track and a tunnel south of Winehaven, along the shore to the ferry pier. Eventually, the Richmond-San Rafael Ferry and Transportation Company purchased the “extensive properties adjoining and including Point Molate” and moved their terminal to Point Molate. But the opening of the Oakland Bay Bridge in 1936 signaled the beginning of the end of the era of ferry service.

Construction of the Richmond-San Rafael Bridge began in 1952 following several ferry strikes. The strikes, which commenced in 1949, severely impacted commerce and transportation in the North Bay, causing the City and Marin County to put up \$1,000 each for a survey of the proposed bridge alignment. In 1953, the California Legislature allocated \$950,000 for engineering and construction began that year. Completion of the Richmond-San Rafael Bridge in 1956 finalized the auto routes across the Bay and ended the need for ferry service.

4.4.4 RESEARCH METHODS AND RESULTS

The Study Area for the cultural survey includes the approximately 412-acre Project Site and Off-Site Improvements described in **Section 4.0.3.3**.

Identification of cultural resources within one-quarter-mile of the Study Area was achieved by consulting pertinent anthropological literature, historic documents, and maps; conducting records searches at the Northwest Information Center (NWIC); conducting Native American consultation; and undertaking field examinations of the Study Area by archaeologists and architectural historians who meet the Secretary of the Interior’s standards for their respective fields. Confidential reports (AES, 2010; AES, 2011) documented the scope and results of the cultural resources inventory, evaluation, consultation, and impact analysis for the Casino Project and were documented in the 2011 FEIR.

An AES 2019 review found that, in addition to the early and largely academic archaeological work undertaken at Point Molate in the first half of the twentieth century (Nelson, 1909; Beardsley, 1954), five modern studies employing survey and/or test excavations have been conducted within the Study Area over the last 40 years (AES, 2010; AES, 2011; Chavez and Holson, 1985; Rippey and Praetzelis, 1980; and Wiberg et al., 1999), sufficiently characterizing these areas.

A total of 22 studies have been submitted to the NWIC (excluding targeted studies specifically prepared for the 2011 FEIR or the Modified Project); these are listed in **Table 4.4-2**.

TABLE 4.4-2
SUMMARY OF STUDIES INCLUDING OFF-SITE IMPROVEMENT LOCATIONS

Study #	Author(s)	Date	Title
S-871	Banks, Fredrickson, Lee, McMurray	1977	Cultural Resource Survey of the Wildcat and San Pablo Creeks Water Resources Project, Contra Costa County, California
S-1262	Stillinger, Fredrickson	1978	An Archaeological Survey of the Proposed North Richmond Bypass, Contra Costa County, California

Study #	Author(s)	Date	Title
S-1768	Banks, Orlins	1979	Final Report of the Testing of Cultural Resources within the Wildcat and San Pablo Creeks Flood Control and Water Resources Project, Contra Costa County, California
S-2051	Chavez	1980	Frethy Land & Investment Company Property Subdivision, Richmond, California
S-4950	Buss	1982	Archaeological Survey Report for Proposed High Occupancy Vehicle Lanes From Bay Bridge to Carquinez Bridge, 04-ALA/CC-80 2.0/8.0, 0.0/14.1, EA 04209-400211
S-6492	Holman	1973	Wildcat Gardens Archaeological Reconnaissance
S-8736	Orlins	1986	A Cultural Resource Assessment of the Chevron USA, Inc. Richmond Refinery Deep Water Outfall Project, Contra Costa County, California
S-10169	Chavez	1988	Chevron Wastewater Reclamation Project
S-11124	Chavez	1989	Rancho San Pablo Mixed Use Development, Parcel B
S-12270	Padon, Crownover, Rosenthal, Marmor, Jertberg	1990	Technical Appendix – Cultural Resources Assessment, Chevron Modernization Project
S-13376	Haney	1991	An Archaeological Study of the 10-Acre Port Development and Construction Property at 217 West Gertrude Avenue in North Richmond, Contra Costa County
S-15161	Hupman, Chavez	1993	Archaeological Resources Investigations for the Chevron Reformulated Fuels Project EIR, Richmond, California
S-15172	Lehmann, Padon	1993	Historical/Architectural Report for Richmond Parkway Project
S-21278	Chavez	1998	Negative Archaeological Survey Report, 04-CCO-580 PM 5.9/6.0, EA 1S1001, Proposed Repair Of Roadway Damage
S-24937	Harmon	2000	Cultural Resources Assessment, Former Breuner Property, Proposed Bay View Business Park and Access Alignments, City of Richmond, Contra Costa County, California
S-34843	Koenig	2008	East Bay Municipal Utility District, Richmond Advanced Recycled Expansion Water Project, Archaeological Survey Report
S-38251	Meyer	2011	Buried Archaeological Site Assessment and Extended Phase I Subsurface Explorations for the I-80 Integrated Corridor Mobility Project, Caltrans District 04, Alameda and Contra Costa Counties, California, 04-Alacc-80, P.M. ALA 1.99/P.M. ALA 8.04, P.M. CC 0.0/P.M. CC 13.49, EA 3A7761/EA 3a7771
S-38874	Sakowicz	2012	Historic Property Survey Report, Scofield Detour Plan Revalidation in the City of Richmond, Contra Costa County, California, 04-CC-580 P.M. 5.8/6.3 E-FIS Project Number: 0400000483
S-43533	Koenig	2013	West County Wastewater District Capital Improvement Plan, First SRF Application Projects, Contra Costa County, Cultural Resources Survey Report
S-48942	Whitaker	2016	Historic Property Survey Report for the Richmond-San Rafael Bridge Access Improvement Project, Contra Costa and Marin Counties, California
S-50385	Kelley	2016	Cultural Resources Study and Phase I Archaeological Testing for the Goodrick Avenue Bay Trail Gap Closure Project, Richmond, Contra Costa County, California
S-51535	UK	1977	Cultural Resource Assessment of the Proposed Pipeline from the San Pablo Sewage Treatment Plant to the Richmond Sewage Treatment Plant and the Expansion of the San Pablo Sewage Treatment Plant Facilities

Historic resources within the Study Area, or immediately adjacent are summarized in **Table 4.4-3** and include: the Historic District and NFD, the Richmond Belt Line Railway, the Richmond-San Rafael Bridge, the West County Wastewater District (WCWD) Water Pollution Control Plant, and the Chinese Shrimp Camp. Prehistoric resources include sites CA-CCO-282, -283, -284, and -423. Individual site information is summarized after **Table 4.4-3**.

TABLE 4.4-3
SITES WITHIN OR IMMEDIATELY ADJACENT TO THE PROJECT SITE, INCLUDING OFF-SITE IMPROVEMENT LOCATIONS

P-Number	Trinomial	Site Type	Site Location
P-07-161	CCO-282	Shellmound	Modified Project
P-07-162	CCO-283	Shellmound	Modified Project
P-07-277	CCO-506H	Chinese Shrimp Camp	Modified Project
P-07-454	CCO-423	Midden, artifacts	Modified Project
P-07-455	CCO-422H	Winehaven	
P-07-2556	CCO-284	Shellmound	Modified Project (widening Stenmark Drive)
P-07-4593	-	Richmond Belt Line Railroad	Modified Project
P-07-4680	-	WCWD Plant	Off-site improvements (sewer lines)
P-07-4745	-	Richmond-San Rafael Bridge	Off-site improvements (sewer lines)

4.4.4.1 Winehaven Historic District and the NFD (CA-CCO-422H)

In 1976, Winehaven was nominated to the NRHP by the Winehaven Historic Study Committee (Edwards, 1976) and was listed on the NRHP in 1978 as the Winehaven Historic District. In 2002, a Memorandum of Agreement (MOA) was prepared as part of the transfer of the Winehaven property from the Navy to the City. Subjects addressed in the MOA included an archaeological site investigation and NRHP nomination of eligible properties, adjustment of the Historic District boundary, licensing and leasing of Winehaven properties, and preservation planning. A 2009 addendum to the MOA addressed the continuation of the nomination process for eligible sites and revisions to the Historic District boundary (**Appendix Q**). Both the MOA and 2009 addendum required submission of new nominations or nomination addenda to the SHPO or the Keeper of the NRHP. As discussed below, the addendum process is in progress.

Section 4.4.3.2 includes a detailed description of the Historic District; when nominated, an overly large boundary was defined that included not only Winehaven-related structures, but structures associated with the NFD. To correct the nomination, a number of studies were undertaken. Historic architectural studies of the Modified Project and immediate surroundings began in 1995 when William Self and Associates (Wills and Self, 1995) evaluated World War II-era buildings/structures and underground storage tanks within the NFD (but outside the Historic District) and concluded the following: "None of the individual World War II-era buildings or structures at Point Molate that have been evaluated...appear to retain integrity sufficient to meet the criteria of eligibility for National Register listing (Wills and Self, 1995:7)."

The Navy adopted the recommendations of Wills and Self that the Navy buildings were not eligible to the NRHP; SHPO concurred in a letter dated September 27, 1996 (SHPO, 1996).

Also in 1996, JRP (Appendix N of 2011 FEIR) conducted research for a proposed revision of the Historic District boundaries. The study by JRP resulted in the recommendation that the Historic District boundary be reduced from 71 to 27 acres. JRP identified 35 structures within the Historic District that were judged to be contributing elements. SHPO concurred with the assessment of contributing elements in a letter dated May 8, 1996 (Appendix N of 2011 FEIR).

Though the SHPO concurred, the recommended changes were rejected by the Keeper of the NRHP on October 27, 1998. The Keeper rejected the boundary revision on the grounds that federal regulations bar the reduction of the physical boundaries of a district listed prior to December 13, 1980, unless “the property has ceased to meet the criteria for listing in the National Register because the qualities which caused it to be originally listed have been lost or destroyed, or such qualities were lost subsequent to nomination and prior to listing (36 CFR § 60.15 [a][1]).” These reports and correspondence were included in Appendices N and Y of the 2011 FEIR.

In October 2019, the Richmond Historic Preservation Commission concurred with the finding that the NFD structures should be removed from the Historic District, that they did not possess values that would make them eligible as a separate historic district, and that the NFD structures did not possess values that would make them eligible as a contributor to the nearby Rosie the Riveter/National Home Front Historic District in the City.

In compliance with the MOA and MOA addendum (see **Section 4.4.3**, Environmental Setting), AES has clarified the contributing elements of the Historic District and is preparing a NRHP nomination addendum (see **Figure 4.4-1** and **Table 4.4-1**). The addendum identifies 35 contributing buildings and one contributing structure in the Historic District, provides additional information as requested by the Keeper of the NRHP, and does not call for a physical reduction in the Historic District boundary.

In 2019, JRP examined remaining elements of railroad tracks within the Historic District. JRP found that there are a number of sections of rail line, some clearly associated with Winehaven, others with the Richmond Belt Line Railway, and still others which could not be definitively assigned to a particular use or date of construction. In its findings, JRP noted that the internal railway system played an integral role in the Winehaven operation as it was used to transfer raw materials and millions of gallons of wine within the complex, to the wharf, and to the Richmond Belt Line Railway for shipment. JRP also noted that although some of the original track has been pulled up or partially or completely buried, several large, intact segments of the original system exist, located in close proximity to the warehouses they served. Additionally, with the exception of the replaced-in-kind ties, much of the original fabric of the internal railway system, particularly the rails, remains intact (**Figure 4.4-1**, **Appendix Q**).

JRP concluded that there were sections of track associated with the historically significant themes of wine production and industrial design of the Historic District, and that some tracks are extant and intact, they appear to convey the necessary aspects of integrity (location, design, materials, workmanship, setting, feeling, and association) to demonstrate value in visually representing the industrial nature of the Historic District. The Richmond Historic Preservation Commission concurred with the findings and as a result, the surviving elements of the Winehaven internal railway system that are located next to Building Nos. 1 and 10 are being recommended as a contributing element of the NRHP Historic District in the addendum being prepared by the City.

4.4.4.2 Richmond Belt Line Railway

As discussed above, a segment of the Richmond Belt Line Railway is evident as it passes through the Historic District on top of a cut bank above and to the east of Building Nos. 1, 6, and 10 (**Figure 4.4-3**). The significance of this segment was evaluated in 2008 and again in 2019 (JRP, 2019) and recommended ineligible for listing on the NRHP or the CRHR because of its inability to meet any of the eligibility requirements and the poor integrity of the feature.

4.4.4.3 Richmond-San Rafael Bridge

The Richmond-San Rafael Bridge crosses the northern portion of the Bay from the City of Richmond in Contra Costa County to San Rafael in Marin County. The bridge has 13 associated buildings and structures composing the San Quentin Maintenance Yard, the Richmond Administration Complex, and a Toll Plaza. Construction of the bridge began in 1953, the top deck opened in 1956, and the bottom deck in 1957. The Richmond-San Rafael Bridge has been found eligible for listing on the NRHP or CRHR.

4.4.4.4 Chinese Shrimp Camp (CA-CCO-506H)

In 1985, Chavez and Holson investigated the northwestern portion of the Chinese Shrimp Camp, completing the first archaeological work to firmly establish its location. Artifacts recovered from the site include an array of domestic items such as ceramic food storage and consumptive containers, bottle glass, window pane, wire nails, etc. In addition, two small jetties and a possible pier remnant were noted protruding into the Bay at low tide. Results of this study determined that the integrity of this site has been affected by the grading and construction of a railroad and other developments.

CA-CCO-506H was subject to archaeological testing by AES in 2008 (AES, 2011). The testing found that a large portion of the historic deposit at CA-CCO-506H had been buried by modern fill. A combination of manual (hand excavation) and mechanical excavation (backhoe) techniques were used, which provided an effective means of identifying site constituents and characterizing the nature of the deposit.

The extensive stratigraphic profiles exposed during exploratory trenching allowed for a firm definition of depth and extent of the historic deposit. Once features of interest were identified, control units were excavated to collect a representative sample of the associated constituents. The investigation identified sporadically distributed historic artifacts, with only a few areas of concentrated constituents and a few well-defined features. Results of the 2008 investigation include a refining of the spatial extent of the site, collection and analysis of a sample of the deposit, and a significance evaluation. The investigation concluded that a portion of the area recorded as CA-CCO-506H contains the requisite data potential to qualify as a historic property/resource pursuant to the NRHP and CRHR because it includes intact features and archaeological deposits that convey information related to site typology, lifeways and social organization, and technology. An NRHP nomination has been prepared for the site, in accordance with the MOAs, and was submitted to SHPO for review.

4.4.4.5 CA-CCO-282

CA-CCO-282 is the remnant of a shell mound recorded by Nelson in 1907. Artifacts and ecofacts¹ noted at the time included whalebone, skeletal remains, several types of shell, hammerstones, a pestle

¹ Ecofacts are organic material, such as animal bones and plants found at an archaeological site, that carry archaeological significance.

fragment, and a 12-inch triangular anvil or pounding stone. After excavating a number of test units within the plotted site boundary, Chavez and Holson concluded that the site had been “totally destroyed” (Chavez and Holson, 1985:55).

The findings of Chavez and Holson were confirmed through fieldwork conducted by AES in 2008 that included intensive surface examination, as well as excavation of auger probes and 10 shovel probes at the plotted location of the site. As a result of these efforts, no prehistoric cultural materials were identified. Comparison of the historic topography of the area (based on examination of historic maps) and the modern landform configuration indicate that the location of the site was likely destroyed in the course of historical grading and soil from the area may have been taken to use as fill elsewhere. Based on the results of the comprehensive testing regime, it was determined that CA-CCO-282 is not a historic property or historic resource as defined by the NRHP and CRHR; SHPO concurrence regarding NRHP ineligibility was received in 1996.

4.4.4.6 CA-CCO-283

CA-CCO-283 is the remnant of a shell mound recorded by Nelson in 1907. Measuring approximately 45 by 61 meters, excavations of this site by Driver and Treganza in 1939 produced 20 burials. In addition to the burials, site constituents included faunal remains, chert and obsidian debitage and tools, and ground and battered stone. In 1954, Beardsley analyzed the remains of the 1939 excavation and was able to identify temporally diagnostic artifacts. This site is thought to have been occupied from approximately 2,500 B.P. to 500 A.D.

In 1985, Chavez and Holson reported on test excavations at the site. The authors employed a series of one-by-one meter units, auger probes, and shovel probes throughout the site. Testing revealed considerable disturbance and re-deposition of the archaeological matrix. The researchers concluded that “CA-CCO-283 lacks depositional integrity and is unlikely to yield information which could significantly contribute to the understanding of history or prehistory” (Chavez and Holson, 1985:55) and therefore was not eligible for listing on the NRHP. Despite these findings, Chavez and Holson noted that the presence of Native American human remains within the site matrix make it “an important cultural resource to the Native American community,” and thus worthy of protection (Chavez and Holson, 1985:55).

In the course of removing a buried fuel line in December of 1999, the Navy encountered numerous artifacts and two disarticulated human bones associated with site CA-CCO-283. Artifacts recovered included a portable mortar, two pestles, a hammerstone, numerous chert flakes, an obsidian biface, a charmstone, one porcelain shard, and a historic glass bottle. Following the discovery, the Navy held two Native American consultation meetings to discuss the disposition of the human remains. Navy records do not indicate precisely who was consulted, although it appears that the Indian Canyon Mutsun Band of Costanoan was one party. The Navy concluded that the cultural affiliation of the human remains could not be determined.

AES implemented an archaeological testing project at site CA-CCO-283 in the spring of 2008 (AES, 2010) that used intensive surface survey and excavation of 13 auger probes, 16 shovel probes, and three control units to characterize the site. Cultural material recovered from CA-CCO-283 was

dominated by marine shell ecofacts. A few of the excavation units produced a very modest array of artifacts and disarticulated human bone fragments.

The subsurface observations indicate that past land use has resulted in severe impacts to the content and integrity of the cultural deposit at CA-CCO-283. Disturbances to the deposit resulted in truncation, re-deposition, feature destruction, and constituent removal. Observations made by AES in the course of fieldwork, viewed in light of past findings (Nelson, 1909; Chavez and Holson, 1985), indicate that the site once occupied a knoll above a seasonal drainage and was re-deposited over a large area during the past 90 years. While it was possible to identify the former nucleus of the archaeological site, the constituents that remain in that locale have been disturbed to such an extent that the site does not include values which would make it eligible to the NRHP or CRHR; SHPO concurred in 1996. Nonetheless, the identification of previously disturbed, disarticulated human bone in a limited area requires continued management of a portion of the site to ensure the proper treatment if human remains are encountered.

4.4.4.7 CA-CCO-284

CA-CCO-284 is the remnant of a shellmound recorded by Nelson in 1907. Very little information was provided about the site when initially recorded, except to note the general location and character. Following recordation of the site by Nelson, significant development and landform alterations occurred atop and adjacent to the site. Prior to 1997 it was assumed that the site had been destroyed. However, archaeological monitoring in 1997 encountered midden, two ash lenses, one intact human burial, and two loci of disturbed and disarticulated human remains (Wiberg et al., 1999). It was concluded that the data clearly indicate that the CA-CCO-284 shellmound possesses intact cultural deposit containing important archaeological materials, indicating eligibility for listing on the CRHR under California Code of Regulations, Title 14, § 4852, subdivision (b).

4.4.4.8 CA-CCO-423

Originally recorded by Rippy, Gerike, and Praetzelis in 1980, this site is characterized by the presence of five loci of prehistoric shell midden and contains a very limited variety of artifacts and ecofacts. The site was auger tested in 1980 to define the vertical and horizontal boundaries, as well as to assess its integrity. Following subsurface examination, four loci were found to lack integrity, while one locus was thought to retain sufficient integrity to warrant future investigation (Rippy and Praetzelis, 1980).

Archaeological work conducted at site CA-CCO-423 by AES in 2008 included intensive survey of all loci reported for the site, extensive auger probing (n=73), excavation of 14 shovel probes, and excavation of three subsurface control units (AES, 2011). The majority of the prehistoric deposit observed consisted of intermittent midden dominated by weathered marine shell. Only trace amounts of cultural material were identified within three of the loci. Although what was recovered represents some form of prehistoric bayside occupation and resource processing, the cultural deposit at the site lacks any stratigraphic integrity and cannot be dated. The lack of any discrete features or diagnostic artifacts precludes the ability of the site to provide important information as it relates to paleoenvironmental conditions, site formation processes, cultural chronology, or culture process. The fragmentary nature of the artifact assemblage and the presence of a high frequency of modern and historic items suggests an extreme degree of post-depositional disturbance. Based on the previous testing work (Rippy and Praetzelis, 1980) as well

as information collected by AES, it was determined that CA-CCO-423 does not contain values which would make it eligible for listing on the NRHP or CRHR.

4.4.4.9 Summary of Cultural Resources within the Study Area

An inventory and evaluation of historic and prehistoric resources was completed within the Study Area. Resources considered to be historic or unique archeological resources under CEQA include the following:

- Historic District (CA-CCO-422H)-associated structures
- Richmond-San Rafael Bridge
- CA-CCO-284 (shellmound)
- Chinese Shrimp Camp (CA-CCO-506H)

Resources that are considered not to be historic or unique archeological resources under CEQA include the following:

- NFD-associated structures within the Historic District
- A segment of the Richmond Belt Line Railway
- CA-CCO-282
- CA-CCO-283
- CA-CCO-423

4.4.5 NATIVE AMERICAN CONSULTATION PROGRAM

Native American consultation was originally initiated on June 29, 2008, when AES contacted the NAHC. The NAHC was asked to query the sacred lands database for the presence of such resources within the Modified Project Site, as well as locations outside of the project footprint identified for infrastructure improvements. Additionally, contact information was requested for Native American individuals and organizations on file with the NAHC. The NAHC responded with a list of seven individuals, who were then contacted by mail on September 3, 2008. Follow-up phone calls were made in October of 2008.

In the time between preparation of the 2011 FEIR and this Subsequent Environmental Impact Report (SEIR), new legislation was adopted by the State of California, specifically AB 52, which is described in the Regulatory Setting section, above.

4.4.5.1 AB 52 and SB 18 Consultation

Owing both to the passage of time and the intervening passage of AB 52, a new Native American consultation program was initiated by the City. The City requested a list of contacts suitable for SB 18 and AB 52 consultation from the NAHC on June 10, 2019, and received a reply dated June 13, 2019. That reply included names and contact information for six individuals. In June 2019, the City sent initial consultation letters pursuant to AB 52 and SB 18 inviting consultation regarding the Modified Project. These letters were sent to Valentin Lopez of the Amah Mutsun Tribal Band, Irenne Zwierlein of the Amah Mutsun Tribal Band of Mission San Juan Bautista, Katherine Erolinda Perez of the North Valley Yokuts Tribe, Charlene Nijmeh of the Muwekma Ohlone Indian Tribe of the San Francisco Bay Area, Ann Marie Sayers of the Indian Canyon Mutsun Band of Costanoan, and Andrew Galvan of the Ohlone Indian Tribe. Subsequently, two people were added to the consultation list, Raymond Hitchcock of Wilton Rancheria

and, after receiving a consultation request, Merlene Sanchez of Guidiville Rancheria (Guidiville). To date, the only response received to the consultation solicitation from the City has been from Guidiville, requesting formal consultation under AB 52.

4.4.5.2 AB 52 Consultation and Tribal Cultural Resources

An initial consultation meeting was held on September 27, 2019, between the City and Guidiville (the Tribe). At the meeting, Guidiville described Point Molate as an island during the prehistoric period that was used by Native peoples for fishing. Guidiville also explained that when they used an area repeatedly, it was common practice to introduce or cultivate useful or medicinal plants, some of which may be present within the Project Site. The Tribe noted a communication from the California Native Plant Society listing plant species that may occur in the East Bay only at Point Molate and discussed that each of these may have been introduced by Native Americans. Guidiville suggested that these plants could be used in vegetation buffers (with interpretive signs) incorporated into the development, allowing residents, casual visitors, and members of Guidiville to harvest the plants if they wished. Guidiville also expressed concern for the health and maintenance of the eelgrass beds that would have fostered fish and sea mammal species that Native Americans would have used for subsistence. At the consultation meeting, Guidiville also discussed interpretive features that could be mitigation measures for impacts to plants that the Guidiville view as TCRs.

Guidiville followed up with a letter to the City. The Tribe identified specific plants as traditional medicinal plants that may have been planted on the site by tribal ancestors, as discussed in the site visit, as TCRs and clarified the identified mitigation measures acceptable to the Tribe. The specific plants are:

- *Dichelostemma multiflorum*
- *Dichondra donnelliana*
- *Elymus glaucus* ssp. *Jepsonii*
- *Grindelia stricta* var. *platyphylla*

Consultation under AB 52 is ongoing.

4.4.6 2011 FEIR ANALYSIS

This section provides a summary of the impacts to cultural and tribal cultural conditions analyzed for the Casino Project (Alternative A) of the 2011 FEIR, followed by a description of changes since the 2011 FEIR that relate to cultural resources and tribal cultural resources.

4.4.6.1 2011 FEIR Summary of Impacts

Impacts

The 2011 FEIR found that the Casino Project would have significant and unavoidable impacts on the Historic District because the Casino Project would have (1) demolished Building No. 6 and (2) constructed new structures in the Historic District boundaries that would have diminished the integrity of character-defining features of the property, including Building Nos. 1, 6, 10, 13, 17, cottages 31-54, cottages 56-59, Building 60, and Building 63.

The 2011 FEIR also concluded that sites CA-CCO-282 and CA-CCO-423 were not CEQA historical resources or unique archeological resources due to site disturbance. Although not eligible due to disturbance, the 2011 FEIR found that site CA-CCO-283 should be protected given the presence of disarticulated human remains within a portion of the deposit. The 2011 FEIR recommended CA-CCO-284 as eligible for listing on the NRHP and CRHR and found that this resource would have been impacted by widening Stenmark Drive and the construction of utility lines, creating a potentially significant impact. CA-CCO-506H (Chinese Shrimp Camp) was recommended eligible to the NRHP and CRHR and would have been impacted by ground-disturbing activities associated with the proposed development, such as removal of a railway line, grading and re-contouring of the ground surface, landscaping, resurfacing of roads, excavation of utility trenches, widening and partial redesign of portions of Stenmark Drive, and the creation of trails and other amenities, creating a potentially significant impact. The 2011 FEIR determined that the impacts to CA-CCO-283 and CA-CCO-506H would be reduced to less-than-significant levels with mitigation.

The 2011 FEIR concluded that Alternative D would have had worse impacts to historical and archeological resources than Alternative A. Alternative D would have resulted in physical destruction to a contributing element (Building No. 6) of the Historic District (CA-CCO-422H), resulting in a significant and unavoidable impact, similar to Alternative A, and would have altered Building Nos. 63 and 17, resulting in a less-than-significant impacts with mitigation. Alternative D also would introduce new structures into the Historic District, which was a significant and unavoidable impact. Alternative F (No Action Alternative) may have resulted in the neglect of structures located within the Historic District (CA-CCO-422H), which the 2011 FEIR determined was a potentially significant and unavoidable impact.

Cumulative Impacts

The 2011 FEIR determined that, with incorporation of mitigation, the Casino Project would not result in cumulatively considerable impacts to cultural resources.

4.4.6.2 Changes Since the 2011 FEIR

Documentation

All documentation was reviewed by an archaeologist meeting the Secretary's guidelines for archaeology; architectural evaluations were provided by a professional architectural historian who meets the Secretary's guidelines for architectural history. Overall, no changes have occurred in the project vicinity since the 2011 FEIR was prepared. The only notable change consists of the proposed off-site recycled water pipeline that runs from Winehaven then along Stenmark Drive, eventually turning onto Western Drive. Those portions of the corridor along Stenmark Drive have been surveyed; there has been no access to those portions of the pipeline corridor on Western Drive. A review of record search materials indicates that the portion of the recycled water line corridor that crosses Chevron property has not been surveyed archaeologically, and no cultural resources have been identified.

Appendix G

Appendix G of the CEQA Guidelines significance thresholds have changed since 2011; a new issue area, Tribal Cultural Resources, was added since the 2011 FEIR. Furthermore, the significance criterion

concerning paleontological and new geological resources was moved to the geology and soils section of an EIR.

City General Plan

A new General Plan was adopted in 2012 that includes more goals related to cultural resources than the former General Plan. These goals include using historical resources as a method for expanding economic opportunities and increasing public awareness of City cultural resources. Additionally, since the 2011 FEIR, the following actions have occurred.

Native American Consultation

The passage of AB 52 increased the opportunities for Native American consultation under CEQA and introduced TCRs to CEQA analysis.

Consultation completed for the 2011 FEIR is described in **Section 4.4.5**. Additionally, as the Applicant for the Casino Project, Guidiville was involved and aware of the presence of prehistoric archaeological sites and Native American burials. Guidiville has since participated in consultation under SB 18 and AB 52 (see **Section 4.4.5**).

Contributing Elements of the Winehaven Historic District

AES reviewed the contributing elements of the Historic District in 2019. The contributing elements of the Historic District have not been diminished by the passage of time, and an additional element, the surviving elements of the Winehaven internal railway system that are located next to Building Nos. 1 and 10, have been recommended as a contributing element of the Historic District by the HPC and will be included in the addendum discussed in **Section 4.4.4.1** (see **Figure 4.4-1** and **Table 4.4-1**).

4.4.7 IMPACTS

4.4.7.1 Thresholds of Significance

Criteria for determining the significance of impacts to cultural resources and tribal cultural resources have been developed based on Appendix G of the CEQA Guidelines and relevant agency thresholds. Impacts associated with cultural resources would be considered significant if the Modified Project would:

- cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5 of the CEQA Guidelines;
- cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5; or
- disturb any human remains, including those interred outside of formal cemeteries.

Impacts associated with tribal cultural resources would be considered significant if the Modified Project would:

cause a substantial adverse change in the significance of a TCR, defined in PRC § 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California

Native American tribe, and that is: a) listed or eligible for listing in the CRHR, or in a local register of historical resources as defined in PRC § 5020.1(k), or b) a resource determined by the Lead Agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in PRC § 5024.1.²

CEQA Guidelines § 15064.5(b)(1) defines “substantial adverse change” as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired. Section 15064.5(b)(2) of the CEQA Guidelines states that the significance of an historical resource is materially impaired when a project:

- demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the CRHR;
- demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to PRC § 5020.1(k) or its identification in an historical resources survey meeting the requirements of Section 5024.1(g) of the PRC unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
- demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the CRHR as determined by a Lead Agency for purposes of CEQA.

Generally, a project that follows the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings or the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings shall be considered as mitigated to a level of less than a significant impact on the historical resource (CEQA Guidelines § 15064.5(b)(3)).

Under the NHPA, if it is determined that historic properties may be affected by an undertaking, the Lead Agency proceeds with the Section 106 process, assessing adverse effects. The criteria of adverse effect are found in Section 800.5(a)(1) of the regulations of the NHPA. According to the criteria, an adverse effect occurs when the integrity of the historic property may be diminished by the undertaking through alteration of the characteristics that qualify the property for the NRHP. Such alteration can be caused directly as a result of the undertaking or be an indirect consequence.

For the sake of consistency, and because this is a CEQA document, the impacts and mitigation measures below are generally discussed using CEQA terminology such as “historical resources” rather than NEPA terminology such as “historic properties.” The analysis provides CEQA impact conclusions.

² In applying the criteria set forth in subdivision (c) of PRC § 5024.1, the Lead Agency shall consider the significance of the resource to a California Native American tribe.

4.4.7.2 Method of Analysis

This analysis below identifies any impacts to historical resources, unique archaeological resources, including human remains, and TCRs (collectively referred to as cultural resources) that could occur from construction and operation of the Modified Project compared to baseline conditions, which are defined for the purposes of the analysis in this section as physical conditions in the vicinity of the study area on or around the publication of the NOP in July 2019. The development footprint square footage is assumed to be the same in the mixed-use space regardless if the development is under Option 1 (Residential-Heavy Scenario) or Option 2 (Commercial-Heavy Scenario) of the Modified Project; thus, for the analysis in this section, there is no distinction between the two options. Impacts to cultural resources were analyzed based on an examination of the Project Site and Off-Site Improvements, background research, site testing and evaluation, agency consultation, and Native American consultation. A project that exceeds the significance thresholds listed above is a project with a significant impact on the environment. Mitigation measures have been identified to reduce impacts.

4.4.7.3 Effects Found Not to be Significant without Further Analysis

Construction of Off-Site Improvements would not affect built historic resources, but could encounter unanticipated discoveries of archeological resources. Construction of the Modified Project has the potential to create significant impacts to cultural resources. All potential impacts are fully analyzed below.

4.4.7.4 Project-Level Impacts

IMPACT 4.4.1	CAUSE A SUBSTANTIAL ADVERSE CHANGE IN THE SIGNIFICANCE OF A HISTORICAL RESOURCE PURSUANT TO § 15064.5
Significance Before Mitigation	Potentially Significant
Mitigation Measures	Modified Project Mitigation: MM 4.4-1; MM 4.4-2 Bay Trail IS/MND Mitigation: CUL-1
Significance After Mitigation	Less than Significant
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

Demolition of NFD Buildings within the Winehaven Historic District

Based on architectural surveys performed by JRP and Self in 1996, there are 16 NFD buildings and six NFD structures within the Historic District boundary that are not associated with the CAWA wine-making industry. These NFD buildings and structures do not appear to meet the definition of historical resources as defined in CEQA Guidelines § 15064.5 and do not contribute to the Historic District. The City has prepared an amendment to the Historic District which would formally remove those 16 buildings and 6 structures from the District because the City's historic consultant has found that these resources are ineligible for listing and do not contribute to the Historic District. Even though the NFD buildings are not historic resources or District contributors, the NFD buildings are still technically part of the Historic District as of the writing of this SEIR. However, the Winehaven District is identified in the RMC as a Historic District, and no demolition can occur without review and approval of the Historic Preservation Commission (HPC). The RMC protects the Winehaven District from changes that would cause a

significant impact to its historic character by requiring HPC's review prior to demolition of structures within the District. In addition, **Mitigation Measure 4.4-1** would ensure that the City does not issue demolition permits associated with the demolition within the Historic District until HPC has reviewed the application to ensure that the building proposed to be demolished is not a contributor to the Winehaven District. The mitigation measure would reduce impacts to less than significant.

Rehabilitation, Alteration, or Relocation of Contributing Elements of the Winehaven Historic District and Introduction of New Construction within the Winehaven Historic District

Contributing structures in the Historic District, which covers approximately 67 acres of the Project Site, would be rehabilitated or adaptively re-used for mixed-use development. Under the City's Zoning Ordinance, development within a historic district requires review and approval by the HPC to ensure consistency with the Secretary of the Interior's Standards for the Treatment of Historic Properties, and as described in Section 3.0, the Modified Project must obtain a certificate of appropriateness from the HPC for development within Winehaven and for the rehabilitation of historic Winehaven buildings. There is the possibility that register-eligible portions of the internal railway system would have to be removed if testing demonstrates that there are hazardous materials in the immediate vicinity requiring remediation. If this occurs, **Mitigation Measure 4.4-2** would require replacement in kind after the remediation process has been completed, restoring the visual aspect of the internal railway system that conveys its significance and reducing the impact to a less-than-significant level.

The Modified Project proposes to designate the Winehaven Historic District as an –H overlay in the PAD. An –H overlay ensures that the HCP will review rehabilitation and new development proposals for compliance with the Secretary of the Interior's Standards within the Historic District. As the portion of the City tasked with preservation of historical resources, approval of project elements by the HPC would ensure that the integrity of the contributory buildings and structures would be maintained and that impacts would be reduced to a less-than-significant level.

New construction is proposed surrounding and within sight lines of the Historic District that could substantially change the setting of the Historic District, affecting the ability of the Historic District to convey its historic character. Official guidance from the National Park Service defines character-defining features as "a prominent or distinctive aspect, quality, or characteristic of a historic property that contributes significantly to its physical character. Structures, objects, vegetation, spatial relationships, views, furnishings, decorative details, and materials may be such features". The following is a list of the collective, site-wide character-defining features of the Historic District that conveys the Historic District's historical significance that underpins its eligibility for listing in the NRHP. The character-defining features are listed to reflect a wide-angled perspective of the entire site followed by focused analyses of individual contributing elements. The following lists the character-defining elements of the Historic District.

- 1) Industrial campus or company town setting sited within a sloped, topographical bowl bordered on the west by Bay and semi-enclosed on the north, east, and south.
- 2) Built environment arranged in two clusters roughly divided by Stenmark Drive. One cluster consisting of stylized industrial warehouses and offices (see item 3 below) sited near tidewater and the other cluster consisting of non-industrial / residential building such as single-family

bungalow cottages, the two-story Winemaster's House, fire station, and power house sited east of and upslope of Stenmark Drive.

- 3) Teutonic architectural style of Building No. 1 (warehouse/wine cellar); Building No. 6 (warehouse/wine cellar); Building No. 10 (loading dock, refrigeration building); and Building No. 13 (power house).
- 4) Exterior cladding of painted wood, unpainted red brick, corrugated galvanized metal, or unfinished concrete with board-form visual texture.

Even with the proposed –H District Overlay, the City finds that the development of new buildings within the Historic District would be potentially significant. The implementation of **Mitigation Measure 4.4-2** would reduce these impacts by requiring the Modified Project Applicant to develop design guidelines that would ensure adherence to the Secretary's Standards, including guidelines regarding sensitive placement and appropriate design of new construction. Adherence to the Secretary's Standards and HPC approvals, as required under the RMC, and Project-specific design guidelines, as identified under **Mitigation Measure 4.4-2**, would reduce the impacts to less-than-significant levels.

Construction of the San Francisco Bay Trail

Impacts as a result of the construction and implementation of the San Francisco Bay Trail (Bay Trail) are analyzed within the San Francisco Bay Trail at Point Molate Initial Study/Mitigated Negative Declaration (IS/MND), which is incorporated by reference, as described within **Section 1.4.4**. The Bay Trail IS/MND determined that impacts from the construction of the Bay Trail resulting in a substantial adverse change in the significance of a historical resource were less than significant after mitigation because although trail construction could exceed the depth of the Belt Line ballast or non-cultural fill (up to 2 feet), resulting in the potential to impact historical resources associated with Site P-07-000277 (Chinese Shrimp Camp), an archaeological monitor must be present. The Bay Trail IS/MND identified **Mitigation Measure CUL-1**, described in **Section 4.4.8**, which would reduce the impacts to less than significant by requiring that an archaeological monitor be present during subsurface activities through Site P-07-000277. If deposits of prehistoric or historical archaeological materials are encountered during project monitoring, all work within 25 feet of the discovery should be redirected until the archaeologist assesses the finds, consults with agencies as appropriate, and makes recommendations for the treatment of the discovery. As a result of the construction of the Bay Trail and implementation of **Mitigation Measure CUL-1**, impacts related to substantial adverse change in the significance of a historical resource would be less than significant with mitigation. The Project would be required to implement **Mitigation Measure CUL-1** when it implements the 1.5-mile Bay Trail project that runs through Point Molate.

IMPACT 4.4.2	CAUSE A SUBSTANTIAL ADVERSE CHANGE IN THE SIGNIFICANCE OF AN ARCHAEOLOGICAL RESOURCE PURSUANT TO § 15064.5
Significance Before Mitigation	Potentially Significant
Mitigation Measures	Modified Project Mitigation: MM 4.4-3; MM 4.4-4 Bay Trail IS/MND Mitigation: CUL-1
Significance After Mitigation	Less Than Significant
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

Construction of the Modified Project

CA-CCO-506H (Chinese Shrimp Camp) is located in an area that may be subjected to ground-disturbing activities associated with the proposed development. Grading and re-contouring of the ground surface, landscaping, widening of roads, excavation of utility trenches, widening and partial redesign of portions of Stenmark Drive, and creation of trails and other amenities have the potential to significantly impact this resource during ground-disturbing activity. The implementation of **Mitigation Measure 4.4-3**, requiring worker training and archaeological monitoring in the vicinity of this resource, would reduce these impacts to less-than-significant levels by requiring physical avoidance of the principal site deposits, requiring worker training so that if outlying artifacts or features are encountered they will be recognized and construction halted, and by having an archaeologist present to ensure that any new finds associated with CA-CCO-506H are properly treated and documented.

The Modified Project lies in a region known to have been used by Native Americans. The remnants of several shellmounds lie within and adjacent to the Study Area, and burials associated with CA-CCO-283 have been recovered even though the bulk of that site has been destroyed. Therefore, there is potential to uncover additional prehistoric resources or human remains during ground-disturbing activities associated with any phase of on-site or off-site construction. If any such a discovery comprises a CRHR-eligible cultural resource, the impacts would be potentially significant.

The implementation of **Mitigation Measures 4.4-3** and **4.4-4** would reduce these impacts to a less-than-significant level by implementing a program of construction worker training, targeted archaeological monitoring, and development of an Unanticipated Discoveries Plan that provides procedures to follow in the event of a find made during construction. The inadvertent discovery of human remains is addressed under **Impact 4.4.3**.

Construction of Off-Site Improvements

Construction of off-site improvements would require grading, excavation, and other construction-related activities. These activities may impact archaeological sites CA-CCO-283, CA-CCO-284, and CA-CCO-506H, as well as yet unknown archaeological resources; therefore, this is a potentially significant impact.

The implementation of **Mitigation Measure 4.4-3** would reduce these impacts to less-than-significant levels by implementing a program of construction worker training, targeted archaeological monitoring, and establishing procedures to follow in the event of a find made during construction.

Construction of the Bay Trail

Impacts as a result of the construction and implementation of the Bay Trail are analyzed within the Bay Trail IS/MND, which is incorporated by reference, as described within **Section 1.4.4**. The Bay Trail IS/MND determined that impacts from the construction of the Bay Trail resulting in a substantial adverse change in the significance of a unique archaeological resource were less than significant after mitigation because although trail construction could exceed the depth of the Belt Line ballast or non-cultural fill (up to 2 feet), resulting in the potential to impact a unique archaeological resource associated with Site P-07-000277, an archaeological monitor must be present. The Bay Trail IS/MND identified **Mitigation Measure CUL-1**, described in **Section 4.4.8**, which would reduce the impacts to less-than-significant levels by

requiring that an archaeological monitor be present during subsurface activities through Site P-07-000277. If deposits of prehistoric or historical archaeological materials are encountered during project monitoring, all work within 25 feet of the discovery should be redirected until the archaeologist assesses the finds, consults with agencies as appropriate, and makes recommendations for the treatment of the discovery. As a result of the construction of the Bay Trail and implementation of **Mitigation Measure CUL-1**, impacts related to substantial adverse change in the significance of an archaeological resource would be less than significant with mitigation. The Applicant would follow the Bay Trail project mitigation measures when constructing the portion of the Bay Trail that runs through the Project Site.

IMPACT 4.4.3	DISTURB ANY HUMAN REMAINS, INCLUDING THOSE INTERRED OUTSIDE OF FORMAL CEMETERIES
Significance Before Mitigation	Potentially Significant
Mitigation Measures	Modified Project Mitigation: 4.4-3; MM 4.4-4; MM 4.4-5 Bay Trail IS/MND Mitigation: CUL-3
Significance After Mitigation	Less Than Significant
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

Construction of the Modified Project and Off-Site Improvements

There is the possibility that human remains, including Native American remains, may be encountered during ground-disturbing construction activities within site CA-CCO-283 or in as-yet unknown archaeological deposits during construction of the Modified Project and its associated off-site improvements. This is a potentially significant impact.

Mitigation Measures 4.4-3, 4.4-4, and 4.4-5 would reduce impacts to human remains by implementing a program for training construction workers and by performing targeted archaeological monitoring. In conformity with California HSC § 7050.5 and PRC § 5097.98, discovery of human remains requires notice to the county coroner. If the coroner determines that the remains are not subject to his or her authority or if the coroner recognizes the human remains to be those of a Native American, or has reason to believe that the remains are Native American, the coroner must contact the NAHC within 24 hours. When the NAHC receives coroner notice of a discovery of Native American human remains, it must immediately notify those persons it believes to be the Most Likely Descendants (MLD). Consultation between the MLDs and the landowner is used to determine methods of avoidance, documentation, and/or removal and treatment of remains. Implementation of **Mitigation Measures 4.4-3, 4.4-4, and 4.4-5** would reduce the impacts to human remains to a less-than-significant level.

Construction of the Bay Trail

Impacts as a result of the construction and implementation of the Bay Trail are analyzed within the Bay Trail IS/MND, which is incorporated by reference, as described within **Section 1.4.4**. The Bay Trail IS/MND determined that impacts from the construction of the Bay Trail resulting in the disturbance of human remains were less than significant after mitigation because all ground-disturbing activities would be treated in accordance with California HSC § 7050.5. The Bay Trail IS/MND identified **Mitigation**

Measure CUL-3, described in **Section 4.4.8**, which would reduce the impacts to less than significant by requiring that in the case of the uncovering of human remains, an archaeologist be contacted, if one is not already onsite, to assess the situation and consult with agencies as appropriate. Additionally, a county coroner should be notified immediately. As a result of the construction of the Bay Trail and implementation of **Mitigation Measure CUL-3**, impacts related to the disturbance of human remains would be less than significant with mitigation. The Applicant would comply with Bay Trail mitigation measures when constructing the Bay Trail.

IMPACT 4.4.4	CAUSE A SUBSTANTIAL ADVERSE CHANGE IN THE SIGNIFICANCE OF A TRIBAL CULTURAL RESOURCE AS DEFINED IN PRC § 21074
Significance Before Mitigation	Potentially Significant
Mitigation Measures	Modified Project Mitigation: MM 4.3-4; MM 4.3-6; MM 4.4-3; MM 4.4-4; MM 4.4-6; MM 4.4-7; MM 4.8-1; MM 4.8-2
Significance After Mitigation	Less Than Significant
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

Construction and Operation of the Modified Project

Consultations with the Guidiville began in 2008 as part of the 2011 FEIR and began formally under AB 52 for the Modified Project with a meeting between the City and the Guidiville in October 2019. The Tribe identified specific plants as traditional medicinal plants that may have been planted on the site by tribal ancestors as TCRs and identified mitigation measures acceptable to the Tribe. The specific plants are:

- *Dichelostemma multiflorum*
- *Dichondra donnelliana*
- *Elymus glaucus* ssp. *Jepsonii*
- *Grindelia stricta* var. *platyphylla*

Mitigation Measure 4.4-7 includes measures identified by the Tribe that the Tribe stated would reduce the impact on TCRs to a less-than-significant level. Measures include use of native plantings and construction of interpretive features.

The Tribe also expressed concerns about other environmental impacts.

Protection of the Eelgrass Beds

Implementation of **Mitigation Measures 4.8-1** and **4.8-2**, and **Mitigation Measures 4.3-4** and **4.3-6**, would reduce impacts to eelgrass beds to less-than-significant levels as discussed in **Impact 4.3.2**.

Cultural Resources Monitoring

The Tribe stated that the mitigation measures related to monitoring for disturbance of cultural resources by new ground-disturbing activities that were included in the previous EIR would ensure that the Tribe did not have concerns regarding these resources.

Implementation of **Mitigation Measure 4.4-3** and **Mitigation Measure 4.4-4** would reduce impacts related to known and unknown sites to less-than-significant levels by implementing a program of construction worker training, targeted archaeological monitoring, and procedures to follow in the event of an unanticipated find made during construction.

Mitigation Measure 4.4-6 would require that a tribal monitor chosen by Guidiville would be invited to observe all ground disturbing activities. Tribal monitoring would ensure that if new archaeological sites are discovered during construction a member of the tribe is available to consult on appropriate treatment.

The above listed mitigation measures would ensure that impacts are reduced to a less-than-significant level.

Construction of Off-Site Improvements

Construction of off-site improvements would require grading, excavation, and other construction-related activities, however no TCRs were identified in the off-site improvement areas. If an archaeological site is uncovered during construction, identification of avoidance measures or implementation of **Mitigation Measure 4.4-4** would reduce impacts to these resources to a less-than-significant level.

Construction of the Bay Trail

Impacts as a result of the construction and implementation of the Bay Trail are analyzed within the Bay Trail IS/MND, which is incorporated by reference, as described within **Section 1.4.4**. The Bay Trail IS/MND determined that impacts from the construction of the Bay Trail resulting in the substantial adverse change in the significance of a tribal cultural resource were less than significant because no tribal cultural resources have been identified within the site that the Bay Trail would be constructed upon. As a result, construction of the Bay Trail would not result in substantial adverse change in the significance of a tribal cultural resource and the impact is less than significant.

4.4.7.5 Cumulative Impacts

IMPACT 4.4.5	CUMULATIVE IMPACTS TO CULTURAL RESOURCES AND TRIBAL CULTURAL RESOURCES
Significance Before Mitigation	Potentially Significant
Mitigation Measures	Modified Project Mitigation: MM 4.4-2; MM 4.4-3; MM 4.4-4; MM 4.4-5; MM 4.3-2; MM 4.3-4; MM 4.3-6; MM 4.4-7; MM 4.8-1; MM 4.8-2 Bay Trail IS/MND Mitigation: CUL-1
Significance After Mitigation	Less Than Significant
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

Cultural Resources

The geographic scope for cumulative analysis for historic era cultural resources is the Project Site, as these cultural resources on the Project Site are contained within the site. The geographic scope for cumulative analysis for prehistoric cultural resources was determined based on the General Plan EIR, which considered that the “cumulative context for archaeological resources and human remains is the Ohlone tribal territory, which includes the areas around San Francisco Bay, Monterey Bay, and the lower Salinas Valley.”

Past actions at the Historic District in combination with the Modified Project, including new construction, rehabilitation, alteration, or relocation of contributing resources within the Historic District could result in a significant cumulative impact. Compliance with the City’s codes protecting historic districts and Secretary of the Interior’s Standards and Guidelines for the Treatment of Historic Properties (**Mitigation Measure 4.4-2**) is generally considered to reduce significant impacts to historic properties, and would appropriately be applied to the Historic District. Additionally, HPC approval of site plans, also required by City code and in **Mitigation Measure 4.4-2**, would guarantee review by the body most knowledgeable about historic resources, ensuring that the Modified Project’s contribution to the cumulative impact would be reduced to less than cumulatively considerable.

The General Plan EIR identified a significant cumulative impact related to prehistoric resources as follows:

“urban development that has occurred over the past several decades in the Ohlone tribal territory, which includes the areas around San Francisco Bay, Monterey Bay, and the lower Salinas Valley, has resulted in the demolition and alteration of innumerable significant archaeological resources, and it is reasonable to assume that present and future development activities will continue to result in impacts on significant archaeological resources. Federal and state laws protect archaeological resources in most instances, but it is not always feasible to protect archaeological resources, particularly when preservation in place would frustrate implementation of projects. For this reason, the cumulative effects of development in the Ohlone tribal territory on archaeological resources and human remains are considered significant.”

Mitigation measures for project-level impacts related to prehistoric resources would also reduce the Modified Project’s contribution to any cumulative impacts by implementation of **Mitigation Measures 4.4-3: Avoidance and Monitoring of Known Archaeological Resources, 4.4-4: Unanticipated Discoveries, 4.4-5: Discovery of Human Remains, and CUL-1**. Accordingly, the Modified Project would not make a cumulatively considerable contribution to this significant cumulative impact.

Tribal Cultural Resources

Possible TCRs identified onsite included several sensitive plant species, which are associated with various habitat types addressed at a project- and cumulative level in the Biological Resources chapter. Cumulative projects and growth within Richmond together are not expected to have a cumulative impact on TCRs, as the TCRs identified by Guidiville consist of these plants growing at Point Molate, and the

project-specific mitigation, including **Mitigation Measures 4.3-2, 4.3-4, 4.3-6, 4.4-7, 4.8-1, and 4.8-2**, will ensure that the Project's impacts remain less than cumulatively considerable,.

4.4.8 MITIGATION MEASURES

This section includes mitigation measures identified to reduce environmental impacts of the Modified Project. Mitigation measures that were identified in the 2011 FEIR have been identified again as appropriate; however, review of the mitigation measures identified in the 2011 FEIR determined that some measures required revisions or were not applicable to the Modified Project. **Appendix K** provides a summary of whether each mitigation measure from the 2011 FEIR was revised, deleted, or kept as is and the reasoning for that determination.

MM 4.4-1 Do Not Issue Building/Demolition Permits for the Winehaven District Until HPC

Approves: The City shall not issue demolition permits associated with demolition or construction in the Winehaven Historic District until the HPC has reviewed the application to ensure that the building proposed to be demolished is not a contributor to the Winehaven District.

MM 4.4-2 Develop and Apply Design Guidelines for the Winehaven Historic District: The Modified Project Applicant shall develop comprehensive Design Guidelines that comply with the Secretary of the Interior's Standards and Guidelines for the Treatment of Historic Properties that will govern the rehabilitation of buildings within the Historic District as well as new construction within the Historic District. The Design Guidelines shall be reviewed and approved by the HPC prior to the issuance of demolition permits to ensure that they would result in a project that complies with the Secretary of the Interior's Standards for Rehabilitation; (2) would result in buildings that are compatible with the Historic District; (3) require preservation of the historic materials and character-defining features of the buildings, and repair instead of replacement of deteriorated features, where feasible; and (4) require replacement in kind should contributing elements of the internal railway system be removed to complete hazardous materials remediation in the vicinity of Buildings No. 1 and 10. In addition, the City shall not issue building permits associated with the Historic District until HPC staff concur that the design of the buildings associated with those permits conforms to the Design Guidelines as part of its review pursuant to Zoning Code section 15.04.303.120. Provisions that must be included in the Design Guidelines include the following.

- a. All work within the Historic District shall be performed in keeping with the Secretary's Standards and Guidelines for the Treatment of Historic Properties (the "Standards").
- b. Alterations to contributing buildings shall be conducted in a sensitive manner consistent with the Standards, and will preserve materials, features, and finishes of contributing resources to the extent feasible. Deteriorated features will be repaired whenever feasible, and when not feasible, these features will be replaced "in kind," matching the original in design, color, texture, and materials, whether these materials are wood, masonry (e.g., brick, concrete, or stone), metal, or some other material.
- c. All Historic District contributing buildings shall be retained. Demolition of existing construction or removal of historically significant features shall be limited and shall meet requirements listed in the Secretary of the Interior's Standards and Guidelines for the Treatment of Historic Properties. Any demolition activities shall be conducted in a manner that shall be sensitive to and protective of Historic District contributors and/or their character-defining features.

- d. Preserve contributing sections of the railway system except if doing so conflicts with remediation requirements. If preservation is not feasible, then the sections of railway tracks shall be replaced in kind.
- e. New buildings constructed within the Historic District boundary shall be consistent with the Standards, including Standard 9, which requires any new construction to be differentiated from but compatible with existing historic buildings.
- f. Prior to the alteration of any contributing buildings within the Historic District, the 1995 Historic American Building Survey documentation shall be reviewed and updated, if needed.
- g. Damaged or deteriorated brickwork throughout any brick structure shall be repaired or replaced to match the existing brickwork; if the painted-on Air Raid Shelter signs are removed, they shall be professionally photographed prior to damage or destruction.
- h. Any work involving the relocation of utilities, water, sewer, or electrical facilities shall avoid impacts to the visual character of the Historic District and its contributing buildings. Installation of any new utility features in visually prominent sites within the District or adjacent to its contributing buildings shall be avoided.

In the cases that contributing buildings must be relocated, these relocations shall be conducted in a manner that, to the greatest extent possible, retains the moved building's existing spatial relationships with other contributing buildings in the Historic District and does not compromise their historic significance; i.e., their ability to contribute to the Historic District.

- i. Provide open space, or the impression of space, between Building No. 1 and any new construction immediately adjacent to it to the north or south. Maintain a clear line of sight through the gap south of Building 1 to the power house and hillside.
- j. Limit vertical development directly west of Building No. 1 between Building No. 1 and the Bay to small structures, such as kiosks or park amenities, which shall be sensitively designed and placed to maintain overall views between Building No. 1 and the Bay in keeping with the Standards.
- k. Any new public entrances added to Building #1 shall be designed to be compatible with the character of the building.
- l. Reconfiguration of Stenmark Drive should de-emphasize the physical division of the east and west portions of the Historic District. Use landscaping to help minimize the visual division.

MM 4.4-3 Avoidance and Monitoring of Known Archaeological Resources

- a. The Applicant shall retain a qualified professional archaeologist to monitor any ground-disturbing activities associated with widening Stenmark Drive or constructing utility systems that are (a) within a 50-foot radius of the mapped boundaries of CA-CCO-284 and (b) anticipated to extend 2.0 feet or more below the current ground surface. If intact features, burials, or diagnostic artifacts are found during construction, the archaeologist shall stop work within a 50-foot radius of the find investigate, document, or otherwise recover the finds in accordance with current professional standards and the unanticipated discoveries requirements (see below). Work shall not resume in the stop-work area until the archeologist determines work can safely proceed.
- b. The Applicant shall maintain a protective buffer of 50 feet around CA-CCO-506H during construction. CA-CCO-506H is located away from most development and infrastructure improvements, however the full extent of subsurface deposits is unknown. Any construction that could extend more than 2.0 feet below ground surface shall, wherever feasible, remain outside the buffer established for CA-CCO-506H. The Applicant shall retain a qualified professional

archaeologist to monitor any ground-disturbing activity within the buffer that is expected to exceed 2.0 feet below surface. If intact features, burials, or diagnostic artifacts are found during construction, the archaeologist shall stop work within a 50-foot radius of the find, investigate, document, or otherwise recover the finds in accordance with current professional standards and **Mitigation Measure 4.4-4**. Work shall not resume in the stop-work area until the archeologist determines work can safely proceed.

- c. Any project-related construction or grading shall avoid the known boundaries of CA-CCO-283 by a minimum of 50 feet in any direction whenever feasible. Where soil-disturbing activities approach closer than 50 feet, the Applicant shall retain a qualified professional archaeological monitor. If intact features, burials, or diagnostic artifacts are found during construction, the archaeologist shall stop work within a 50-foot radius of the find, investigate, document, or otherwise recover the finds in accordance with current professional standards and **Mitigation Measure 4.4-4**, and, if applicable, **Mitigation Measure 4.4-5**. Work shall not resume in the stop-work area until the archeologist determines work can safely proceed.
- d. Prior to the beginning of grading (including ground-clearing) or any construction (including structure relocation), a qualified professional archaeologist shall administer a cultural resources awareness training program to all construction workers who will be performing grading or construction work. The program shall include a review of the types of finds that could occur, regulatory requirements, and a list of contacts (with telephone numbers) in case of accidental discoveries. The training program shall be repeated periodically as new construction workers are added to the project.

MM 4.4-4 Unanticipated Discoveries of Archeological Resources

The project proponent shall have a qualified archeologist observe all ground-disturbing activities. If unidentified cultural resources are encountered during ground-disturbing activities, work in the immediate area and within 50 feet of the discovery shall halt and the qualified archaeologist shall evaluate the resource's significance through a study of its features and artifacts. Construction activities can continue in areas 50 feet away from the find and not associated with the cultural resource location. If the resource is determined not to be significant, no further archaeological investigation or mitigation shall be required. If the find is determined to be a potentially significant archeological resource or TCR, a qualified archaeologist, in consultation with the Planning Director or designee at the City of Richmond, the project proponent, and the Native American monitor, where a potential TCR, shall determine whether preservation in place is feasible.

If preservation in place is infeasible in light of project design or layout, or is unnecessary to avoid significant effects, a Cultural Resources Data Recovery Plan (CRDRP) shall be developed by the qualified archaeologist and, if the find is a TCR, the tribal monitor, to outline excavation and laboratory procedures, and if appropriate, curation at a university depository or other, if a TCR, other treatment considered appropriate by the tribe. The plan shall be submitted to the City for review and approval prior to proceeding with grading and construction activities in the area around the find.

The CRDRP shall identify a proposed data recovery program, and how the data recovery program would preserve the significant information the archaeological resource is expected to contain. Treatment of unique archaeological resources shall follow the applicable requirements of Public Resources Code Section 21083.2. Treatment for most resources would consist of (but would not be not limited to) sample

excavation, artifact collection, site documentation, and historical research, with the aim of targeting the recovery of important scientific data contained in the portion(s) of the significant resource to be impacted by the project. The CRDRP shall include provisions for analysis of data in a regional context; reporting of results within a timely manner and subject to review and comments by the appropriate Native American representative, where applicable, before being finalized; curation of artifacts and data at a local facility acceptable to the City and appropriate Native American representative, if applicable; and dissemination of final confidential reports to the appropriate Native American representative, if applicable, the Northwest Information Center of the California Historical Resources Information System and the City.

MM 4.4-5 Discovery of Human Remains: If human remains are encountered during construction activities, work within 50 feet of the find shall halt immediately and the County Coroner shall be notified in accordance with California HSC § 7050.5 and a qualified archeologist also shall be notified. The coroner will examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or state lands, as per Section 7050.5(b) of the Health and Safety Code. If the coroner determines that the remains are those of a Native American, the coroner will contact the NAHC by phone within 24 hours of making that determination, as per Section 7050(c) of the HSC. The Applicant will act on notification of a discovery of Native American human remains in compliance with Section 5097.9 of the California Public Resources Code. The Applicant and the professional archaeologist are required to contact the Most Likely Descendent (MLD), as determined by the NAHC, regarding the remains. The MLD, in cooperation with the property owner and the lead agencies, will determine the ultimate disposition of the remains. The MLD has 48 hours from the time of being granted access to the site by the landowner to inspect the discovery and provide recommendations to the landowner for the treatment of the human remains and any associated grave goods. In the event that no descendant is identified or the descendant fails to make a recommendation for disposition, the landowner may, with appropriate dignity, reinter the remains and burial items on the property in a location that will not be subject to further disturbance.

MM 4.4-6 Tribal Monitor During Ground Disturbing Activities: The project proponent shall invite Guidiville to choose a monitor and participate in monitoring ground-disturbing activities at least two months before activities begin.

MM 4.4-7 Care of Tribal Cultural Resources: The Applicant shall include the four culturally significant plants identified as TCRs (*Dichelostemma multiflorum*, *Dichondra donnelliana*, *Elymus glaucus* ssp. *jepsonii*, and *Grindelia stricta* var. *platyphylla*) in vegetation buffers (with interpretive signs) in an area within the Project Site that is open to visitors, including members of the Tribe. The Tribe must be able to harvest the plants if desired. In addition, the Modified Project shall construct and/or rehabilitate an uphill trail east of the proposed development that contains periodic interpretive panels, sitting areas, and learning exhibits that tell the story of the early inhabitants of the area. If allowed by the San Francisco Bay Conservation and Development Commission, interpretative panels with the Project Site's history should also be placed near the beach.

Construction of the Bay Trail

This section includes mitigation measures that reduce environmental impacts of the development of the Bay Trail, which would be constructed by the Applicant. The following mitigation measures are incorporated by reference from the Bay Trail IS/MND, as described in **Section 1.4.4**. For ease of reference, the following mitigation measures are numbered the same as found in the Bay Trail IS/MND.

- CUL-1 The contractor shall be required to limit the depth of grading and subsurface activities within P-07-000277 to the depth of the Belt Line ballast (approximately 2 feet). If it is determined that the depth of subsurface activities would exceed the depth of the Belt Line ballast through P-07-000277, then a qualified archaeologist should be retained to monitor project ground-disturbing activities through Site P-07-000277. Archaeological monitors should be empowered to halt construction activities at the location of a discovery to review possible archaeological material and to protect the resource while the finds are being evaluated. Monitoring should continue until, in the archaeologist's judgment, cultural resources are not likely to be encountered. If deposits of prehistoric or historical archaeological materials are encountered during project monitoring, all work within 25 feet of the discovery should be redirected until the archaeologist assesses the finds, consults with agencies as appropriate, and makes recommendations for the treatment of the discovery. If avoidance of the archaeological deposit is not feasible, the archaeological deposits should be evaluated for their eligibility for listing in the CRHR. If the deposits are eligible, impacts to the deposits should be mitigated. Mitigation may include excavation of the archaeological deposit in accordance with a data recovery plan (see CEQA Guidelines § 15126.4(b)(3)(C)) and standard archaeological field methods and procedures; laboratory and technical analyses of recovered archaeological materials; preparation of a report detailing the methods, findings, and significance of the archaeological site and associated materials; and accessioning of archaeological materials and a technical data recovery report at a curation facility. Upon completion of the assessment, the archaeologist should prepare a report to document the methods and results of the assessment. The report should be submitted to the East Bay Regional Park District, the City of Richmond, and the NWIC at Sonoma State University upon completion of the resource assessment.
- CUL-3 Any human remains encountered during project ground disturbing activities should be treated in accordance with California HSC § 7050.5. The District and the County of

Contra Costa should verify that the following directive has been included in the appropriate contract documents: “If human remains are uncovered, work within 25 feet of the discovery shall be redirected and the County Coroner notified immediately. At the same time, an archaeologist shall be contacted—if one is not already on site—to assess the situation and consult with agencies as appropriate. Project personnel shall not collect or move any human remains or associated materials. If the human remains are of Native American origin, the coroner must notify the NNAHC within 24 hours of this identification. The NAHC will identify a Native American MLD to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods.”

4.5 ENERGY

4.5.1 INTRODUCTION

This section addresses the potential for the Point Molate Mixed-Use Development Project (Modified Project) to result in impacts related to energy. Following an overview of the relevant regulatory setting in **Section 4.5.2** and the environmental setting in **Section 4.5.3**, Modified Project-related impacts and identified mitigation measures are presented in **Section 4.5.5** and **Section 4.5.6**, respectively. The energy impacts associated with the Casino Project and analyzed as Alternative A in the *Final Environmental Impact Report for the Point Molate Mixed-Use Tribal Destination Resort and Casino Project* (2011 FEIR) are also summarized in this **Section 4.5.4** and compared to the impacts of the Modified Project.

4.5.2 REGULATORY SETTING

4.5.2.1 Federal

National Energy Conservation Policy Act

The National Energy Conservation Policy Act (NECPA; 42 U.S. Code [USC] § 8251 et seq.) serves as the underlying authority for federal energy management goals and requirements. Signed into law in 1978, it has been regularly updated and amended by subsequent laws and regulations. This act is the foundation of most federal energy requirements. NECPA established energy-efficiency standards for consumer projects and includes a residential program for low-income weatherization assistance, grants and loan guarantees for energy conservation in schools and hospitals, and energy-efficiency standards for new construction. Initiatives in these areas continue today.

National Energy Policy Act of 2005

The National Energy Policy Act of 2005 (42 USC § 13201 et seq.) sets equipment energy efficiency standards and seeks to reduce reliance on non-renewable energy resources and provide incentives to reduce current demand on these resources. For example, under the National Energy Policy Act, consumers and businesses can obtain federal tax credits for purchasing fuel-efficient appliances and products, including hybrid vehicles; constructing energy-efficient buildings; and improving the energy efficiency of commercial buildings. Additionally, tax credits are available for the installation of qualified fuel cells, stationary microturbine power plants, and solar power equipment.

Energy and Independence Security Act of 2007

Signed into law in December 2007, the Energy and Independence Security Act of 2007 (42 USC § 17001 et seq.) is a broad energy bill that includes an increase in auto mileage standards, and also addressed biofuels, conservation measures, and building efficiency. The U.S. Environmental Protection Agency (USEPA) administers the Corporate Average Fuel Economy (CAFE) program, which determines compliance by vehicle manufacturers with existing fuel economy standards. The Energy and Independence Security Act amended the CAFE standards to mandate significant improvements in fuel efficiency (e.g., average fleetwide fuel economy of 35 miles per gallon [mpg] by 2020, versus the previous standard of 27.5 mpg for passenger cars and 22.2 mpg for light trucks).

Another provision of the Energy and Independence Security Act is a mandate to increase use of ethanol and other renewable fuels by 36 billion gallons by 2022; 21 billion of the 36 billion gallons is to include advanced biofuels, largely cellulosic ethanol, that have 50 to 60 percent lower greenhouse gas (GHG) emissions. The bill also includes establishment of a new energy block grant program for use by local governments in implementing energy-efficiency initiatives, as well as a variety of green building incentives and programs, among other things.

Energy Star® Program

In 1992, the USEPA introduced Energy Star® as a voluntary labeling program designed to identify and promote energy-efficient products to reduce GHG emissions. The program applies to major household appliances, lighting, computers, and building components such as windows, doors, roofs, and heating and cooling systems. Under this program, appliances that meet specifications for maximum energy use established under the program are certified to display the Energy Star® label. In 1996, the USEPA joined the U.S. Department of Energy to expand the program, which now includes qualifying commercial and industrial buildings as well as homes.

4.5.2.2 State

Warren-Alquist Act

The 1974 Warren-Alquist Act (Public Resources Code § 25000 et seq.) established the California Energy Commission (CEC) and created a State policy to reduce wasteful, uneconomical, and unnecessary uses of energy by employing a range of measures. The California Legislature continues to amend the Act to address pressing energy needs and issues, and the CEC publishes an updated version of the Act each year. The 2019 edition of the Warren-Alquist Act was published in February of 2019.

State of California Integrated Energy Policy Report

Senate Bill (SB) 1389 requires the CEC to adopt an Integrated Energy Policy Report (IEPR) every two years. The IEPR contains an assessment of major energy trends and issues facing the electricity, natural gas, and transportation fuel sectors within California. The Report provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the economy of California; and protect public health and safety.

The IEPR calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the IEPR identifies a number of strategies, including assistance to public agencies and fleet operators in implementing incentive programs for Zero Emission Vehicles and their infrastructure needs, and encouragement of urban designs that reduce vehicle miles traveled and accommodate pedestrian and bicycle access.

The Draft 2019 IEPR was submitted for public comment on November 8, 2019 and covers a broad range of topics including decarbonizing buildings, integrating renewables, energy efficiency, energy equity, electricity reliability, climate adaptation activities for the energy sector, a natural gas assessment, a transportation energy demand forecast, and the California Energy Demand Forecast. The 2019 IEPR provides the results of the CEC assessments on a variety of energy issues facing California. Many of

these issues will require action if the State is to meet its climate, clean energy, air quality, and other environmental goals while maintaining reliability and controlling costs.

California Energy Efficiency Standards

The Energy Efficiency Standards for Residential and Non-Residential Buildings (California Building Energy Efficiency Standards) specified in Title 24, Part 6 of the California Code of Regulations (CCR) was established in 1978 in response to a legislative mandate to reduce energy consumption in California. The standards are updated periodically to allow for consideration and possible incorporation of new energy-efficiency technologies and methods. The most recent standards were adopted in 2019 and took effect on January 1, 2020 (for building permit applications submitted on or after that date). These standards are updated every three years.

The new standards require solar photovoltaic systems for new homes and offer builders better windows, insulation, lighting, ventilation systems, and other features that reduce energy consumption in homes and businesses. Single-family homes built with the 2019 standards will use approximately 7 percent less energy due to energy efficiency measures versus those homes built under the 2016 standards. Accounting for rooftop solar requirements, homes built under the 2019 standards will use about 53 percent less energy than those built under the 2016 standards. Non-residential buildings are expected to use about 30 percent less energy primarily due to lighting upgrades.

California Historical Building Code

Title 24, Part 8, the California Historical Building Code (CHBC), § 8-901.5, exempts "Qualified Historical Buildings" from California Energy Efficiency Standards, with limited exceptions. A "Qualified Historical Building or Structure" is defined as "any structure or property, collection of structures, and their related sites deemed of importance to the history, architecture, or culture of an area by an appropriate local or state governmental jurisdiction" including "historical buildings or structures on existing or future national, state or local historical registers or official inventories, such as the National Register of Historic Places (NRHP), State Historical Landmarks, State Points of Historical Interest, and city or county registers or inventories of historical or architecturally significant sites, places, historic districts, or landmarks as well as "places, locations, or sites identified on these historical registers or official inventories and deemed of importance to the history, architecture, or culture of an area by an appropriate local or state governmental jurisdiction." (Health & Safety Code § 18955)

Exemptions from energy efficiency standards are meant to protect historic buildings from alterations meeting prescriptive or performance energy standards that may reduce their historic integrity. The rehabilitation project as a whole must continue to meet the "regular" California Building Code. The CHBC provides alternative code compliance to preserve character-defining features of a historic building. Alternative provisions to the code are usually applied on a case-by-case basis in consultation and agreement with the local code official. Where disagreements arise regarding the application of the code, the State Historical Building Safety Board may be consulted.

California Green Building Standards Code

The California Green Building Standards Code (CALGreen), specified in CCR, Title 24, Part 11, is a State-wide regulatory code for all buildings, residential and commercial included. The regulations are intended to encourage more sustainable and environmentally friendly building practices, require low-pollution emitting substances that cause less harm to the environment, conserve natural resources, and promote the use of energy-efficient materials and equipment. The standards require that all new residential and non-residential development implement various energy conservation measures, including ceiling, wall, and concrete slab insulation; weather stripping on doors and windows; closeable doors on fireplaces; insulated heating and cooling ducts; water heater insulation blankets; and certified energy efficient appliances. CALGreen is updated periodically and the latest update, CALGreen 2019, becomes effective on January 1, 2020.

Renewables Portfolio Standard Program

The California Renewables Portfolio Standard (RPS) program was established in 2002 by SB 1078 and requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide a certain percentage of their supply from renewable sources. The initial requirement was that at least 20 percent of electricity retail sales had to be served by renewable resources by 2017. The RPS program was accelerated in 2015 with SB 350 that mandated a 50 percent RPS by 2030. In 2018, SB 100 was signed into law, increasing the RPS to 60 percent by 2030 and requiring all electricity in California to come from carbon-free resources by 2045.

Assembly Bill 1007 (Pavley)-Alternative Fuel Standards

Assembly Bill (AB) 1007, (Pavley, Chapter 371, Statutes of 2005) required the CEC to prepare a State plan to increase the use of alternative fuels in California; therefore, the CEC prepared the State Alternative Fuels Plan in partnership with the California Air Resources Board (CARB) and in consultation with other local, State, and federal agencies. The final State Alternative Fuels Plan, published in December 2007, attempts to achieve an 80 percent reduction in GHG emissions associated with personal transportation, even as the population of California increases.

Appliance Efficiency Regulations

California Appliance Efficiency Regulations, CCR Title 20, § 160 et seq. contain standards for both federally regulated appliances and non-federally regulated appliances. More than 23 different categories of appliances are regulated, including refrigerators, freezers, water heaters, washing machines, dryers, air conditioners, pool equipment, and plumbing fittings. The Regulations are regularly updated to allow consideration of new energy efficiency technologies and methods. The current standards were adopted by the CEC in 2018 and apply to appliances that are sold or offered for sale in California.

4.5.2.3 Local

Green Building Ordinance

The City of Richmond's (City) green building ordinance (Richmond Municipal Code [RMC] Chapter 6.45) mandates incorporation of green building measures in City construction projects. The ordinance applies

to all City projects with more than 5,000 square feet of conditioned floor area as well as to projects undertaken by others that receive more than \$300,000 of aid or subsidy from the City.

City of Richmond General Plan

The Energy and Climate Change Element of the City General Plan 2030 (General Plan) includes the following goals and policies relevant to energy consumption from land use development within the City. A summary of the consistency of the Modified Project with the General Plan is included as **Appendix L**.

GOAL EC-3 *Sustainable and Efficient Energy Systems.* Reduce the City's consumption of energy by encouraging energy conservation, and supporting the consumption of energy produced by climate-friendly technologies. Reduce the City's overall waste stream by reducing the City's consumption of goods and materials, and by adopting a zero-waste philosophy.

Policy EC3.1 Renewable Energy. Promote the generation, transmission, and use of a range of renewable energy sources such as solar, wind power, and waste energy to meet current and future demand and encourage new development and redevelopment projects to generate a portion of their energy needs through renewable sources.

Policy EC3.2 Energy Efficiency and Conservation. Promote efficient use of energy and conservation of available resources in the design, construction, maintenance, and operation of public and private facilities, infrastructure, and equipment. Collaborate with partner agencies, utilities, and businesses to support a range of energy efficiency, conservation, and waste reduction measures including: development and retrofitting of green buildings and infrastructure; installation of energy-efficient appliances and equipment in homes and offices; and heightened awareness of energy and conservation issues. Collaborate with local workforce development programs to train and employ Richmond [City] residents in these other green jobs sectors.

GOAL EC-4 *Sustainable Development.* Reduce energy consumption by promoting sustainable land uses and development patterns. Pursue infill development opportunities and encourage the construction of higher-density, mixed-use projects around existing public transit infrastructure, schools, parks, neighborhood-serving retail, and other critical services. Incorporate ecologically sustainable practices and materials into new development, building retrofits, and streetscape improvements.

Policy EC4.3 Green Building and Landscaping. Require energy and resource efficient buildings and landscaping in all public and private development projects. Encourage the use of green and sustainable development standards and practices in planning, design, construction, and renovation of facilities; promote the use of green streets that incorporate extensive landscaping, pervious surfaces and native planting; encourage new development and redevelopment projects to be LEED-certified green buildings;

and promote ecologically sensitive approaches to landscaping. Adopting green standards and practices will improve the quality of the built environment, reduce environmental impacts, and support economic development goals for creating a green economy.

City of Richmond Climate Action Plan

In October 2016, the City adopted a Climate Action Plan to address environmental, social, and economic issues related to climate change. The Climate Action Plan, an implementing action of the Energy and Climate Change Element adopted in 2012, was developed to further the goals of the Energy and Climate Change Element, Community Health and Wellness Element, and other General Plan Elements and will serve as a roadmap for significantly reducing energy consumption and meeting or exceeding State GHG emissions reduction targets. The document will aid the City in achieving State goals established through AB 32 and SB 375 and air emissions standards adopted by CARB. Applicable goals and objectives are as follows.

- GOAL 1 GHG Emissions Reduction.** The City is committed to substantially reducing GHG emissions originating from the community and from government operations. The City will contribute to emissions reductions needed to achieve State-wide targets and reduce the societal and environmental risks associated with climate change.
- Objective 1 Energy Efficient Buildings and Facilities.** Support energy conservation by businesses, residents, City government, and schools. Promote efficient use of energy in the design, construction, and operation of public and private facilities, infrastructure, and equipment.
- Objective 2 Increase Use and Generation of Renewable Energy.** Promote the generation, transmission, and use of a range of renewable energy sources, such as solar, wind power, and waste energy to meet current and future demand. Encourage new development and redevelopment projects to generate a portion of their energy needs through renewable sources.
- Objective 3 Sustainable Transportation and Land Use.** Encourage the use of low-emission and renewable fuel vehicles by residents and businesses, schools, public agencies, and City government. Support and promote enhanced and expanded public transit; walkability and bicycling; mixed-use urban streets; and creation of an urban landscape that reduces reliance on private automobiles. Promote the safe and efficient movement of goods by truck, rail, and ship to support port operations and industrial uses.
- Objective 4 Zero Waste.** Reduce the City's overall waste stream by reducing consumption of goods and materials, and by adopting a zero-waste philosophy. Promote waste reduction and recycling to minimize materials that are processed in landfills.
- Objective 5 Water Conservation.** Promote the use of existing incentives and develop new incentives to encourage schools, government facilities, residences, commercial businesses, and

industrial users to reduce water consumption and increase the use of graywater and recycled water. Promote water efficient features and landscaping in all new development.

- Objective 6 Green Infrastructure, Urban Forestry, and Agriculture.** Restore and protect the natural environment to sequester GHG emissions and mitigate impacts of climate change, while updating the built environment in the City to allow for adaptation to potential climate change impacts such as sea-level rise and flooding. Promote development standards and land use patterns that encourage long-term sustainability, such as supporting the restoration of natural features and ecological systems to support the natural functions of soil, water, tree canopies, creeks, open spaces, and other natural resources. Protect neighborhoods, infrastructure, buildings, and other facilities from the impacts of climate change such as sea level rise and flooding. Collaborate with local urban agriculture and tree planting organizations to identify sites with urban forestry and/or agriculture potential.
- Objective 7 Green Business and Industry.** Reduce and mitigate carbon dioxide and other GHG emissions from large commercial and industrial sources. Promote “green” industries while providing jobs and training to City residents. Encourage existing businesses and industries to become environmentally advanced and continue making positive contributions to the community. Work with businesses and industry, residents, and regulatory agencies to reduce the impact of direct, indirect, and cumulative impacts of pollution from industry, the Port, railroads, diesel trucks, and busy roadways.
- Objective 8 Resiliency to Climate Change.** Prepare City residents, workers, and businesses for future impacts of climate change, including changing weather patterns, sea level rise, prolonged periods of heat exposure, poor air quality, and associated health impacts. Ensure that community members have access to resources and programs that protect public health. Ensure affordable, safe, and climate resilient housing, as well as access to local food and agriculture.

4.5.3 ENVIRONMENTAL SETTING

Information provided in this section is derived from a number of sources, including energy use estimates provided in **Appendix H** and **Appendix M**. This analysis focuses on the manner in which development could alter the Point Molate Site (Project Site) under baseline conditions, which are defined for the purposes of the analysis in this section as physical conditions on or around the publication of the Notice of Preparation (NOP) in July 2019.

4.5.3.1 State

Energy Profile

California ranked 48th among the states and the District of Columbia in per capita energy consumption in 2017, with an annual per capita consumption rate of 200 million British thermal units (BTU). For comparison, Louisiana, the state with the largest per capita energy consumption, had an annual per

capita consumption rate of 960 million BTUs in 2017. At approximately 40 percent of total energy consumption, the transportation sector is the largest energy consumer in California, which has more registered vehicles than any other state and among the longest work commute times in the nation. Industrial uses consume about 23.1 percent of State-wide energy consumption, commercial uses consume about 18.7 percent, and residential uses account for approximately 18 percent, (U.S. Energy Information Administration [EIA], 2018).

California relies on a regional power system composed of a diverse mix of natural gas, renewable, hydroelectric, and nuclear generation resources. Almost 75 percent of the electrical power needed to meet this demand is produced in the State; with the remaining 25 percent generated outside of California (EIA, 2018). In 2018, California's in-State electricity was derived from coal (0.1 percent), nuclear sources (10.2 percent), natural gas (24.1 percent), and renewable resources that include geothermal, biomass, hydroelectric resources, wind, and solar (65.5 percent) (EIA, 2018). In 2017, California ranked second in the nation as a producer of conventional hydroelectric generation and first as a producer of electricity from solar, geothermal, and biomass resources.

With regard to energy usage, the California Public Utilities Commissions' Long Term Procurement Plan (LTPP) proceedings were established to ensure a safe, reliable, and cost-effective electricity supply in California. A major component of the LTPP proceeding addresses the overall long-term need for new system reliability resources, including the adoption of system resource plans. These resource plans will allow the California Public Utilities Commission to comprehensively assess the impacts of State energy policies on the need for new resources.

4.5.3.2 Pacific Gas and Electric Company

Pacific Gas and Electric Company (PG&E) is an investor-owned utility company that provides electricity and natural gas supplies and services throughout a 70,000-square mile service area that extends from Eureka in the north to Bakersfield in the south, and from the Pacific Ocean in the west to the Sierra Nevada in the east. The nine-county San Francisco Bay Area and the entire City is within the PG&E service area. PG&E operates and maintains 106,681 circuit miles of electric distribution lines and 18,466 circuit miles of interconnected transmission lines, as well as 42,141 miles of natural gas distribution pipelines and 6,438 miles of transmission pipelines (PG&E, 2018). Operating characteristics of the PG&E electricity and natural gas supply and distribution systems are provided below.

PG&E Electric Utility Operations

PG&E provides "bundled" services (i.e., electricity, transmission, and distribution services) to most of the six million customers in its service territory, including residential, commercial, industrial, and agricultural consumers. Customers also can obtain electricity from alternative providers such as municipalities or Customer Choice Aggregators, as well as from self-generation resources like rooftop solar installations. In 2018, PG&E generated and/or procured a total of 48,832 gigawatt hours of electricity. Of this total, PG&E owns 7,686 megawatts (MW) of generating capacity (**Table 4.5-1**). The remaining electrical power is purchased from other sources in and outside of California.

TABLE 4.5-1
PG&E-OWNED ELECTRICITY GENERATING SOURCES

Source	Generating Capacity (MW)
Nuclear	2,240
Hydroelectric	3,891
Fossil Fuel-Fired	1,400
Fuel Cell	3
Photovoltaic	152
Total	7,686
Source: PG&E, 2018.	

Renewable Energy Resources

California law requires load-serving entities, such as PG&E, to gradually increase the amount of renewable energy they deliver to their customers. SB 350 became effective on January 1, 2016, increasing the amount of renewable energy that must be delivered by most load-serving entities, such as PG&E, to their customers from 33 percent of their total annual retail sales by the end of the 2017-2020 compliance period to 50 percent of their total annual retail sales by the end of the 2028-2030 compliance period. In September 2018, the California Governor signed SB 100 into law, increasing the California electricity portfolio that must come from renewables from 50 percent to 60 percent by 2030; and establishing a State policy that 100 percent of all retail electricity sales must come from RPS-eligible or carbon-free resources by 2045.

Renewable generation resources, for the purposes of the RPS program, include bioenergy such as biogas and biomass, certain hydroelectric facilities (30 MW or less), wind, solar, and geothermal energy. During 2018, 38.9 percent of energy deliveries from PG&E were from renewable energy sources, exceeding the annual RPS target of 28 percent (**Table 4.5-2**).

TABLE 4.5-2
PG&E RENEWABLE ENERGY DELIVERIES

Source	Percent of Total Energy Portfolio
Biopower	4.4
Geothermal	3.7
Wind	10
RPS-Eligible Hydroelectric	2.7
Solar	18.1
Total	38.9
Source: PG&E, 2018.	

Electricity Transmission

As of December 31, 2018, PG&E owned approximately 18,000 circuit miles of interconnected transmission lines operating at voltages ranging from 60 kilovolts (kV) to 500 kV. PG&E also operated 84 electric transmission substations with a capacity of approximately 65,000 megavolt amperes (MVA). The PG&E electric transmission system is interconnected with electric power systems in the Western

Electricity Coordinating Council, which includes many western U.S states; Alberta and British Columbia, Canada; and parts of Mexico.

Electricity Distribution

The PG&E electric distribution network consists of approximately 107,000 circuit miles of distribution lines (approximately 20 percent underground and 80 percent overhead), 50 transmission switching substations, and 769 distribution substations, with a capacity of approximately 32,000 MVA.

These distribution substations serve as the central hubs of the PG&E electric distribution network. Emanating from each substation are primary and secondary distribution lines connected to local transformers and switching equipment that link distribution lines and provide delivery to end users. In some cases, PG&E sells electricity from its distribution facilities to entities, such as municipal and other utilities, that resell the electricity. PG&E operates electric distribution control center facilities in Concord, Rocklin, and Fresno, California; these control centers are a key component of the PG&E effort to create a smarter, more resilient grid.

PG&E Natural Gas Operations

PG&E provides natural gas transportation services to “core” customers and to “non-core” customers (e.g., industrial, large commercial, and natural gas-fired electric generation facilities) that are connected to its gas system in its service territory. Core customers can purchase natural gas procurement service (i.e., natural gas supply) from either PG&E or non-utility third-party gas procurement service providers (referred to as core transport agents). When core customers purchase their gas supply from a core transport agent, PG&E continues to provide gas delivery, metering, and billing services to customers. When PG&E provides both transportation and procurement services, PG&E refers to the combined service as “bundled” natural gas service. Currently, more than 97 percent of core customers, representing nearly 80 percent of the annual core market demand, receive bundled natural gas service from PG&E.

PG&E does not provide procurement service to non-core customers, who must purchase their gas supplies from third-party suppliers. PG&E offers backbone gas transmission, gas delivery (local transmission and distribution), and gas storage services as separate and distinct services to its non-core customers. Access to the PG&E backbone gas transmission system is available for all natural gas marketers and shippers, as well as non-core customers. PG&E also delivers gas to off system customers (i.e., those customers outside of the PG&E service territory) and to third-party natural gas storage customers. In 2018, total sales of natural gas were 208,274 million cubic feet (PGE, 2018).

PG&E Local Energy Infrastructure

PG&E lines enter the Project Site from the south and run along Stenmark Drive to a service connection near Navy Building 13, from which power is distributed throughout the Project Site to customers to the north on Stenmark Drive. Electricity, currently used for street lighting and in Buildings 6 and 123, was previously used at the wastewater treatment plant (WWTP), which has since ceased operations (City of Richmond, 2002). Buildings at the Project Site are not currently heated; however, heat was previously provided through boilers and electric sources. Heating for the 28 on-site cottages was provided by a heating oil system.

According to the PG&E gas facilities maps, there are no existing PG&E gas lines currently serving the Project Site. The nearest existing gas service is located on Western Drive immediately south of Interstate 580 (I-580), in the Point Richmond neighborhood. The lines in this area vary in size from 4 inches near I-580 to 20 inches further south near Canal Drive and West Cutting.

4.5.3.3 Local

Marin Clean Energy

In 2013, the City joined Marin Clean Energy (MCE) to increase renewable energy choices for local businesses and residents. A “Community Choice Aggregation” program, MCE procures electricity from renewable sources – solar, wind, bioenergy, geothermal, and small hydro – and then partners with PG&E to deliver electricity to homes and businesses. As of 2015, over 80 percent of the City’s electrical customers have enrolled in MCE; of these, 99 percent are enrolled in the Light Green Option that sources 56 percent of its energy supply from renewable energy sources, and less than 1 percent were enrolled in the Deep Green option, which provides a 100 percent renewable energy option (City of Richmond, 2016d).

4.5.4 2011 FEIR ANALYSIS

This section provides a summary of the impacts from energy usage analyzed for the Casino Project of the 2011 FEIR, followed by a description of any changes since the 2011 FEIR that relate to energy resources.

4.5.4.1 2011 FEIR Summary of Impacts

Impacts

Energy demands from the Casino Project were not estimated in the 2011 FEIR, but the emissions estimates provided in the air quality analysis included area sources such as natural gas and hearth fuel combustion for space heating. Several air quality mitigation measures identified in the 2011 FEIR would have reduced energy usage. These mitigation measures included the construction of an on-site solar array capable of producing at least 1.5 MW of power, using rooftop materials with an albedo rating of at least 30, using alternative-fueled (e.g., biodiesel and electric) construction and maintenance vehicles/equipment for at least 15 percent of the fleet, and implementing energy efficient lighting and appliances.

Cumulative Impacts

Cumulative impacts from energy usage were not evaluated in the 2011 FEIR.

4.5.4.2 Changes Since the 2011 FEIR

The Modified Project being proposed has changed since the 2011 FEIR Proposed Project. In addition, there have been several regulatory updates that are considered in the analysis below, including updates to the California Title 24 Energy Efficiency Standards and CALGreen Code, which were updated in 2019.

The California Appliance Efficiency Regulations were also updated in 2018 and the City Climate Action Plan was adopted in 2016.

4.5.5 IMPACTS

4.5.5.1 Thresholds of Significance

Criteria for determining the significance of impacts to energy resources have been developed based on Appendix F and Appendix G of the California Environmental Quality Act Guidelines and relevant agency thresholds. Impacts associated with energy would be considered significant if the Modified Project would:

- result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; or
- conflict with or obstruct a State or local plan for renewable energy or energy efficiency.

4.5.5.2 Method of Analysis

This analysis in this chapter identifies energy impacts that could occur from construction and operation of the Modified Project. This analysis focuses on the manner in which development could alter the environment under baseline conditions, which are defined for the purposes of the analysis in this section as physical conditions on or around the publication of the NOP in July 2019. The analysis provides construction and operational energy use estimates for the Modified Project under both the commercial-heavy and residential-heavy scenario as described in **Section 3.0**. The impacts are analyzed based on an evaluation of whether this energy use would be considered excessive, wasteful, or inefficient taking into account the energy efficiency features of the Modified Project, as well as required compliance with applicable standards and policies aimed to reduce energy consumption, including the City Climate Action Plan and the California Building Energy Efficiency Standards. Energy emissions details supporting the Modified Project estimates presented in this section are provided in **Appendix H**. The analysis also considers whether the Modified Project would conflict with or obstruct a State or local plan for renewable energy or energy efficiency.

4.5.5.3 Effects Found Not to be Significant Without Further Analysis

The potential energy impacts from development of the Modified Project are fully analyzed below.

4.5.5.4 Project-Level Impacts

IMPACT 4.5.1	SIGNIFICANT ENVIRONMENTAL IMPACTS DUE TO WASTEFUL, INEFFICIENT, OR UNNECESSARY CONSUMPTION OF ENERGY RESOURCES
Significance Before Mitigation	Potentially Significant
Mitigation Measures	Modified Project Mitigation: MM 4.2-1 (f); MM 4.2-2; 4.13-6
Significance After Mitigation	Less Than Significant
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

Construction Energy Requirements

Modified Project construction would consume energy primarily from fuel energy consumed by construction vehicles and equipment. Fossil fuels used for construction vehicles and other equipment would be used during site clearing, grading, paving, and building. Fuel consumed during construction would be temporary in nature and would not represent a significant demand on available fuel. There are no unusual project characteristics that would necessitate the use of construction equipment that would be less energy-efficient than at comparable construction sites in the region or State. Estimated fuel and energy use for construction of the Modified Project is presented in **Table 4.5-3**.

TABLE 4.5-3
CONSTRUCTION FUEL AND ENERGY USAGE

Source	Construction Category	Total Fuel Consumption			
		Diesel	Gasoline	Natural Gas	Electric Vehicles
		(gallons)		(Diesel Gallon Equivalents)	(kilowatt hours)
Residential-Heavy Scenario					
Project	Off-road Construction Equipment	472,919	0	0	0
	On-road Mobile	33,797,190	1,093,816	1,346,938	3,715,897
	Material Export - Tug Boats	4,141	0	0	0
WWTP	Off-road Construction Equipment	256	0	0	0
	On-road Mobile	288	9.68	11	34
Total		34,270,653	1,093,826	1,346,949	3,715,931
Commercial-Heavy Scenario					
Project	Off-road Construction Equipment	472,919	0	0	0
	On-road Mobile	33,812,765	906,703	1,347,463	3,025,869
WWTP	Off-road Construction Equipment	256	0	0	0
	On-road Mobile	288	9.68	11	34
Total		34,286,227	906,713	1,347,475	3,025,903
Source: Appendix M.					

Source: **Appendix M**.

Several air quality (**Section 4.2**) emission reduction measures would also reduce fuel and electricity use during construction of the Modified Project. As described in **Section 4.2.5.2**, construction of the Modified Project would use all Tier 4 Final off-road equipment, except for paving equipment. This would significantly reduce fuel consumption and increase energy efficiency of construction equipment.

Mitigation Measure 4.2-1 (f) would reduce energy consumption by requiring the contractor to minimize equipment idling time. These mitigation measures would reduce fuel and energy use during all stages of construction and avoid the wasteful, inefficient, or unnecessary consumption of fuel energy. Additionally, the Modified Project would decrease the energy associated with material extraction and construction by reusing existing buildings rather than constructing new buildings to meet existing City demand for commercial and residential space. Therefore, construction of the Modified Project would not result in inefficient, wasteful, or unnecessary consumption of fuel energy.

Operational Energy Requirements

The operational phase would consume energy for multiple purposes including, but not limited to, building heating and cooling, refrigeration, lighting, electronics, office equipment, commercial machinery (including kitchen appliances), and vehicle trips. Project operation would consume energy in two primary forms: (1) on-site energy use; and (2) transportation energy use. These are discussed below. **Table 4.5-4** presents the estimated energy use for the Modified Project.

TABLE 4.5-4
ESTIMATED PEAK ENERGY DEMANDS OF THE MODIFIED PROJECT

Type of Energy	Peak Demand
Electricity	5,850 kVA ¹
Natural Gas	358,150 Mbtu/h ¹
Gasoline	3,099,288 gallons per year ²
kVA = kilovolt amperes Mbtu/h = thousands of international British thermal units per hour ¹ Point Molate Technical Dry Utilities Study, Appendix H ² Based on the National Highway Traffic Safety Administration passenger car and light truck CAFE standards for model years 2017-2021 (U.S. Department of Transportation [DOT], 2014); 2020 Modified Project vehicle miles traveled (Appendix D); 339,648 miles/day = (21.7 daily vehicle miles traveled [VMT] per capita)*(15,652 average daily trips); Annual gasoline use in gallons/year = (339,648 miles/day)*(365 day/year)*(0.025 gallons/mile)	

On-Site Energy Conservation

In accordance with California Energy Code Title 24, the Modified Project would be required to meet the 2019 Building Energy Efficiency Standards for new residential and non-residential construction. This includes standards for water and space heating and cooling equipment; insulation for doors, pipes, walls and ceilings; and appliances, to name a few.

As described in **Section 3.0**, the Modified Project includes the rehabilitation of existing historic buildings within the Winehaven Historic District (Historic District) that is listed on the NRHP. Therefore, historic buildings within the Project Site would be subject to the CHBC and exempt from California Energy Efficiency Standards. Reusing existing buildings rather than constructing new buildings is itself a conservation strategy that decreases the energy associated with material extraction and construction.

As discussed in **Section 4.2**, the Modified Project includes a number of design measures that would reduce transportation fuel and water consumption, thereby reducing the energy associated with Modified Project operations. These design measures, as well as additional energy conserving measures, have been incorporated into **Mitigation Measure 4.2-2**. These measures would reduce the consumption of electricity, gasoline, and natural gas; therefore, with incorporation, energy usage for Modified Project operation will not be wasteful, inefficient, or unnecessary.

Transportation Energy Use

As shown in **Table 4.5-4**, under the Modified Project, the total estimated VMT for the Modified Project is 339,648 miles per day (**Appendix D**) resulting in the consumption of an estimated 3,099,288 gallons of gasoline annually. VMT estimates are the sum of all project trips generated by a project multiplied by the

distance they travel. With 15,652 total daily trips, the average trip length for the Modified Project would be approximately 21.7 miles. As discussed in **Section 4.13**, the Modified Project includes a number of components that result in an overall reduction in VMT. Most notably, of the 15,652 total trips generated by the Modified Project (refer to **Appendix D**), approximately 3,130 trips would be “captured” internally from trips between the various uses within the Project Site, eliminating the need for these trips to travel to areas outside of the Project Site. Additionally, the total trips generated by the Modified Project are expected to be reduced by approximately 21 and 23 percent under Option 1 and Option 2, respectively, based on the proposed Transportation Demand Management (TDM) plan identified by **Mitigation Measure 4.13-6**. The reduction in VMT due to internal capture and TDM results in a reduction in gasoline consumption compared to a project that did not provide a mix of uses and TDM, and ensures that the project is not using vehicle fuel in a wasteful or inefficient manner.

Summary of Operational Energy Requirements

As shown in **Table 4.5-4**, the Modified Project would result in the consumption of energy, natural gas, and transportation fuel. This is a potentially significant impact. As discussed above, various proposed design features and mitigation measures would be implemented to ensure the more efficient use of energy resources during project operation. With mitigation, the Modified Project would not result in the wasteful, inefficient, or unnecessary consumption of energy resources. Therefore, this impact would be considered less than significant.

IMPACT 4.5.2	CONFLICT WITH A STATE OR LOCAL PLAN FOR RENEWABLE ENERGY OR ENERGY EFFICIENCY
Significance Before Mitigation	Less Than Significant
Mitigation Measures	None Required
Significance After Mitigation	Not Applicable
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

The Modified Project would be implemented in accordance with the 2019 California Building Energy Efficiency Standards. The new standards require solar photovoltaic systems for new homes and window features, insulation, lighting, ventilation systems, and other features that reduce energy consumption in homes and businesses. Additionally, the fire and police station portion of the Modified Project will be in compliance with the Green Building Requirements for City Building and Traditional Public Work Projects, as defined in RMC Chapter 6.45. As such, the fire and police station buildings must achieve the relevant rating according to the GreenPoint Rated checklist or the relevant LEED requirements. The renovations of the contributing buildings to the Historic District would improve the energy efficiency of the buildings by meeting Title 24, Part 8, The CHBC.

The Energy and Climate Change Element of the General Plan includes goals, policies, and actions that are relevant to energy consumption from land use development within the City. These goals and policies

are individually identified in **Appendix M** and an assessment is made as to whether these goal and policies are reasonably applicable to the Modified Project. As shown in **Appendix M**, the Modified Project is consistent with the applicable goals and policies of the General Plan Energy and Climate Change Element.

Development of the Modified Project would also be subject to applicable policies in the City's Climate Action Plan adopted by the City on October 25, 2016. The City's Climate Action Plan includes strategies, performance goals, and actions that are relevant to GHG emissions and energy consumption from land use development within the City. These strategies are individually identified in **Appendix N** and an assessment is made as to whether the climate action plan strategies are reasonably applicable to the Modified Project, and whether the Modified Project is consistent with each strategy. As shown in **Appendix N**, the Modified Project is consistent with all applicable climate action plan strategies.

Accordingly, the Modified Project would not conflict with a State or local plan for renewable energy or energy efficiency. This is a less-than-significant impact, and no mitigation is required.

IMPACT 4.5.3	CUMULATIVE IMPACTS DUE TO INCREASED ENERGY USE
Significance Before Mitigation	Less Than Significant
Mitigation Measures	None Required
Significance After Mitigation	Not Applicable
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

The cumulative impact area for energy resources includes the City and the PG&E service boundaries. Development of the Modified Project, in combination with other development within the City and PG&E's service boundaries, would result in the permanent and continued use of electricity and natural gas resources. As discussed in **Section 4.14**, a will-serve letter sent by PG&E (**Appendix H**) acknowledges the willingness and availability of PG&E to serve the Project Site, based on the energy use requirements of the Modified Project and considerations of anticipated growth in the PG&E service area. Additionally, the General Plan Draft Environmental Impact Report identifies a less-than-significant impact to energy resources in the General Plan buildout scenario. As discussed above, development of the Modified Project will be consistent the goals and policies of the General Plan, and responds to existing demand for commercial and residential uses in the City and in the region. Several aspects of the Modified Project would help manage the amount and efficiency of energy consumption and would ensure that the related consumption is not inefficient, wasteful, or unnecessary or place a significant demand on regional energy supplies. Overall, the Modified Project, combined with past, present, and other foreseeable development in the area, would not result in a significant cumulative impact due to energy use.

4.5.6 MITIGATION MEASURES

Review of the mitigation measures identified in the 2011 FEIR determined that some measures required revisions or were not applicable to the Modified Project. It was determined that several of the mitigation measures that were identified in the 2011 FEIR are no longer applicable in regards to energy for the Modified Project. **Appendix K** provides a summary of whether each mitigation measure from the 2011 FEIR was revised, deleted, or kept as is and the reasoning for that determination.

No mitigation measures were identified in the 2011 FEIR due directly to energy impacts. No energy mitigation measures are identified for the Modified Project. The mitigation measures discussed in the analysis above, including the requirement to limit construction truck idling and implement a TDM plan, would ensure the Project's energy impacts are less than significant and less than cumulatively considerable.

4.6 GEOLOGY, SOILS, AND MINERAL RESOURCES

4.6.1 INTRODUCTION

This section provides a description of the geology and soils in the Point Molate Mixed-Use Development Project (Modified Project) area and describes the changes to those conditions that would result from implementation of the Modified Project. In addition, although listed as a separate section in Appendix G of the California Environmental Quality Act (CEQA) Guidelines, mineral resources are also addressed in this section as the methodology and subject are relatively similar. Following an overview of the relevant regulatory setting in **Section 4.6.2** and the environmental setting in **Section 4.6.3**, project-related impacts and mitigation measures are presented in **Section 4.6.5** and **Section 4.6.6**, respectively. The geology, soil, and mineral resource impacts associated with the Casino Project and analyzed as Alternative A in the *Final Environmental Impact Report for the Point Molate Mixed-Use Tribal Destination Resort and Casino Project* (2011 FEIR) are also summarized in **Section 4.6.4** and compared to the impacts of the Modified Project.

4.6.2 REGULATORY SETTING

4.6.2.1 Federal

National Pollutant Discharge Elimination System

In addition to non-point sources of pollution, the federal Clean Water Act addresses point sources of pollution through the National Pollutant Discharge Elimination System (NPDES) program. In some states, the U.S. Environmental Protection Agency has delegated permitting authority to the regional water quality agency. For the Modified Project, the permitting authority is the State Water Resources Control Board (SWRCB). The SWRCB requires a Construction General Permit if a project will disturb one or more acres of soil. The Construction General Permit regulates the discharge of stormwater to surface water during construction activities. This permit requires that all construction activities: complete a risk assessment, eliminate or reduce non-stormwater discharges to storm sewer systems and Waters of the U.S., and develop and implement a site-specific Stormwater Pollution Prevention Plan (SWPPP).

A SWPPP describes Best Management Practices (BMP) that will be implemented during construction and designs a program to inspect and maintain all BMPs. The goal of a SWPPP is to limit erosion during construction-related earth moving, mass grading, cut and fill activities, and to prevent sediment-laden stormwater and other potential pollutants from being transported offsite. Typical BMPs in a SWPPP include temporary erosion control measures (such as silt fences) and retaining sediment onsite using vegetated swales or basins. When filing for a Construction General Permit, one must submit a Notice of Intent, risk assessment, site map, SWPPP, annual fee, and signed certification statement to the SWRCB. Refer to **Section 4.8.2** for a discussion of the water quality regulatory setting.

National Earthquake Hazards Reduction Act

In 1997, the U.S. Congress passed the Earthquake Hazards Reduction Act to “reduce the risks to life and property from future earthquakes in the United States through the establishment and maintenance of an effective earthquake hazards and reduction program.” To accomplish this, the Act established the National Earthquake Hazards Reduction Program (NEHRP). The NEHRP has been periodically reviewed

and reauthorized by Congress; the last reauthorization occurred in 2018 (Federal Emergency Management Agency [FEMA], 2019).

The role of NEHRP is to collaborate with FEMA, the National Institute of Standards and Technology, the National Science Foundation, and the U.S. Geological Survey (USGS), to improve the understanding of earthquake hazards and risk and reduce the Nation's vulnerability to earthquakes (FEMA, 2019).

Antiquities Act

Passed in 1906, the Antiquities Act prohibits the collection, destruction, injury, or excavation of “any historic or prehistoric ruin or monument, or any object of antiquity” that is situated on federal land without permission of the appropriate land management agency. The Act also provides for the criminal prosecution, including fines and imprisonment, for individuals who commit one or more of the acts described above. While neither the Antiquities Act nor its implementing regulations (found at 43 Code of Federal Regulations 3) explicitly mention fossils or paleontology, the inclusion of “object[s] of antiquity” in the Act has been interpreted to extend to paleontological resources by many federal agencies. As such, projects involving federal lands require permits for paleontological resource evaluation and mitigation efforts that involve excavation, collection, etc.

4.6.2.2 State

California Environmental Quality Act

The CEQA provides protection for *unique paleontological resources* and *unique geologic features*, and requires that impacts to such resources be considered in the project review process. The Act distinguishes between ubiquitous fossils that are of little scientific consequence, and those which are of some importance by providing protection for the latter. While CEQA does not precisely define *unique paleontological resources*, criteria established by the Society of Vertebrate Paleontology (SVP) provide guidance. The SVP defines a significant paleontological resource as one which meets one or more of the following criteria (SVP, 1995).

- Provides important information shedding light on evolutionary trends and/or helping to relate living organisms to extinct organisms
- Provides important information regarding the development of biological communities
- Demonstrates unusual circumstances in the history of life
- Represents a rare taxon or a rare or unique occurrence, is in short supply, and is in danger of being destroyed or depleted
- Has a special and particular quality, such as being the oldest of its type or the best available example of its type
- Provides important information used to correlate strata for which it may be difficult to obtain other types of age dates

For the purpose of this analysis, a *unique geologic feature* is defined as a resource or formation that:

- is the best example locally or regionally;
- embodies distinct characteristics of a geologic principal that is exclusive locally or regionally;

- provides a key piece of geologic information important in geology or geologic history;
- is a type locality of a geologic feature;
- contains a mineral not known to occur elsewhere locally or regionally; or
- is used repeatedly as a teaching tool.

California Public Resources Code

Section 5097.5 of the Public Resources Code (PRC) prohibits “knowing and willful” excavation, removal, destruction, injury, or defacement of paleontological resources on public lands without prior permission from the appropriate agency. Public lands include those “owned by, or under the jurisdiction of, the state, or any city, county, district, authority, or public corporation, or any agency thereof.” If paleontological resources are identified within a given project area, the Lead Agency must consider those resources when evaluating project impacts. The level of consideration may vary with the importance of the resource in question.

California Building Standards Code

The California Building Standards Code (CBSC) is Title 24 of the California Code of Regulations. The CBSC is published every three years. The 2019 CBSC became effective on January 1, 2020. Under California law, the California Building Standards Commission is responsible for coordinating all building standards, which must be centralized in Title 24 to be enforceable.

The California Building Code (CBC) is Part 2 of the CBSC. The purpose of the CBC is to establish minimum requirements to safeguard public health, safety, and general welfare and to provide safety to firefighters and emergency responders during emergency operations. CBC provisions are minimum building standards, therefore local amendments must be equivalent or more restrictive. CBC provisions apply to construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure or any appurtenances connected or attached to buildings and structures in California. The CBC includes the American Society of Civil Engineers (ASCE) standards by reference. The ASCE 7 Minimum Design Loads for Buildings and Other Structures provides structural load requirements for earthquakes and other hazards. ASCE 7 is referenced throughout the CBC, especially in Chapter 16 Structural Design.

Chapter 16 of the CBC outlines structural design requirements including design for seismic hazards. Section 1613 mandates that every structure be designed and constructed to resist the effects of earthquake motions, with specific design requirements for different Seismic Design Categories of buildings.

Chapter 18 of the CBC details provisions for building and foundation systems including geotechnical investigation requirements. Geotechnical investigations should include soil classifications and determination of location of expansive soils. The investigations should also include groundwater table depth and evaluation of geologic and seismic hazards depending on the determined Seismic Design Category of the proposed structure.

The California Historical Building Code is Part 8 of the CBSC. The purpose of this Code is to provide alternative regulations to the CBC for buildings designated as qualified historical buildings or properties.

This Code requires a knowledgeable architect or engineer to conduct a structural capacity evaluation for historical structures. Historical structures must withstand 0.75 times the seismic forces and wind loads prescribed by the CBC requirements.

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972, and prohibits the placement of structures intended for human occupancy from being built across active fault traces in California. The Act requires delineation of zones (Alquist-Priolo zones) along active faults in order to regulate development on or near active fault traces. For the purposes of the Act, active faults are those that have ruptured in the last 11,000 years (California Department of Conservation [DOC], 2019). The Act addresses only the hazards of surface fault rupture and is not intended to regulate activities relating to other earthquake hazards such as liquefaction, landslides, or tsunamis. Cities and counties are required to regulate development projects within Alquist-Priolo zones.

Seismic Hazards Mapping Act

This Seismic Hazards Mapping Act requires city, county, and local permitting agencies to regulate urbanization development and redevelopment projects within seismic hazard zones that have been delineated by the state geologist. Before a development permit can be granted to a proposed project located in a seismic hazard zone, a geotechnical investigation of the site must be conducted and appropriate mitigation measures incorporated into the project design.

California Geological Survey Special Publication 117A

The California Geological Survey (CGS) initially published Special Publication 117 in 1997. The document was revised and re-released in 2008 as Special Publication 117A (CGS, 2008). This publication contains general guidelines for the evaluation and mitigation of seismic hazards, as well as guidelines for reviewing geotechnical reports. Special Publication 117A incorporates two documents that were published in response to Special Publication 117: *Recommended Procedures for Implementation of CGS Special Publication 117-Guidelines for Analyzing and Mitigating Liquefaction Hazards in California* and *Recommended Procedures for Implementation of CGS Special Publication 117-Guidelines for Analyzing and Mitigating Landslide Hazards in California*. These documents outline specific guidelines for liquefaction and landslide hazard evaluation and mitigation.

Surface Mining and Reclamation Act of 1975

The California Surface Mining and Reclamation Act (SMARA) is part of the California PRC, Division 2, Chapter 9, § 2710, et seq. SMARA was enacted to limit new development in areas with significant mineral deposits, and requires the state geologist to classify lands within California into Mineral Resource Zones (MRZ), according to the presence or absence of significant mineral resources.

Mineral resources can include geologic deposits of valuable minerals used in various manufacturing processes and the production of construction materials. The primary goal of classifying MRZs is to ensure local governments recognize the mineral potential of the land before making land use decisions that preclude mining of the geological resource. Thus, in classifying MRZs, the state geologist considers solely subsurface geology and disregards the existing land use or land ownership.

San Francisco Bay Plan

The San Francisco Bay Conservation and Development Commission (BCDC) is the agency responsible for maintaining and carrying out the provisions of the San Francisco Bay Plan (Bay Plan). The Bay Plan contains information that describes the values associated with the San Francisco Bay (Bay) and policies regarding future uses of the Bay and shoreline, including fill restrictions. The Modified Project may involve building upon previously filled areas of the Bay shoreline. The following finding and policy in the Safety of Fills section of the Bay Plan are relevant for the Modified Project.

Finding 1: To reduce risk of life and damage to property, special consideration must be given to construction on filled lands in the Bay. (Similar hazards exist on the poor soils throughout the Bay Area, including soft natural soils, steep slopes, earthquake fault zones, and extensively graded areas.)

Policy 2: Even if the Bay Plan indicates that a fill may be permissible, no fill or building should be constructed if hazards cannot be overcome adequately for the intended use in accordance with the criteria prescribed by the Engineering Criteria Review Board.

Policy 3: To provide vitally needed information on the effects of earthquakes on all kinds of soils, installation of strong-motion seismographs should be required on all future major land fills. In addition, the BCDC encourages the installation of strong-motion seismographs in other developments on problem soils, and in other areas recommended by the USGS, for purposes of data comparison and evaluation.

Policy 4: Adequate measures should be provided to prevent damage from sea level rise and storm activity that may occur on fill or near the shoreline over the expected life of a project. The BCDC may approve fill that is needed to provide flood protection for existing projects and uses. New projects on fill or near the shoreline should either be set back from the edge of the shore so that the project would not be subject to dynamic wave energy, be built so the bottom floor level of structures would be above a 100-year flood elevation that takes future sea level rise into account for the expected life of the project, be specifically designed to tolerate periodic flooding, or employ other effective means of addressing the impacts of future sea level rise and storm activity. Rights-of-way for levees or other structures protecting inland areas from tidal flooding should be sufficiently wide on the upland side to allow for future levee widening to support additional levee height so that no fill for levee widening is placed in the Bay.

4.6.2.3 Local

City of Richmond

Excavation, Grading, and Earthwork Construction Ordinance

Section 12.44.030 of the City of Richmond (City) Excavation, Grading, and Earthwork Construction Ordinance establishes minimum standards and requirements for grading, excavating, and filling activities, and identifies procedures by which the standards and requirements are enforced. The provisions of the ordinance supplement the zoning and subdivision regulations of the City. These provisions and other City ordinances are applicable to projects constructed within City limits.

The ordinance requires that a registered civil engineer prepare both interim and final erosion and sediment control plans. The interim and final plans must define measures to control and minimize erosion, sedimentation, and fugitive dust during the construction and operation of a project. Additionally, the ordinance requires that fill not create an exposed surface steeper than a horizontal to vertical ratio of 2:1 and not be placed on a cut or natural slope steeper than a horizontal to vertical ratio of three to one. The ordinance is implemented through the City's permitting process, which requires adherence to grading and seismic safety requirements within the CBC. The ordinance could also require a geotechnical report (dependent upon the proposed grading plan). The geotechnical report must be prepared by a geotechnical engineer and be based upon test borings or excavations. The report shall indicate soil issues that would impact structures, such as expansive soils, and recommendations to maintain safety.

City of Richmond General Plan 2030

A summary of the consistency of the Modified Project with the General Plan 2030 (General Plan) is included as **Appendix L**. The following are goals and policies relevant to the Open Space and Conservation Element and the Public Safety and Noise Element of the General Plan.

GOAL CN2 **Conserved Open Space.** Conserve open space to ensure that Richmond's expansive shoreline, network of parklands, trails, hillsides, and undeveloped natural areas remain viable in supporting biological communities and providing sanctuary for future generations. Conserve open space, expand public access to open space, where appropriate, and acquire additional lands where feasible. Continue to protect surrounding hills and viewsheds as character-defining features that provide scenic backdrops, as well as publicly accessible trails and vistas.¹

Policy CN2.6 **Minimize soil depletion and erosion.** Prevent erosion caused by construction activities. Retain natural vegetation and topography and minimize grading of hillsides.

Policy CN2.8 **Preserve mineral resources in undeveloped areas that have been classified by the State Mining and Geology Board as having state-wide or regional significance for possible future extraction.** Avoid nuisances, hazards, or adverse environmental, public health, and safety impacts associated with mineral extraction by employing methods such as development setbacks, buffers, screening, and other appropriate measures. In locations where mineral extraction is no longer a viable practice, provide environmentally sensitive remediation and reuse.

GOAL SN1 **Risk Management of Natural and Human-Caused Disasters.** Minimize the risk of injury, loss of life, property damage, and environmental degradation from seismic activity, geologic hazards, flooding, and fire and the storage, use, and transport of

¹ Goal CN2 does not specifically address geology, soils, and mineral resources. However, Policy CN2.6, which concerns the minimization of soil depletion and erosion, is included in the General Plan to support Goal CN2. Therefore, Goal CH2 is included in this SEIR to provide regulatory context for Policy CN2.6 and CN2.8.

hazardous materials and operations. Promote a sustainable approach to reduce impacts of natural disasters such as flooding and fire.

- Policy SN1.1** **Geologic and Seismic.** Minimize risk of injury, loss of life, and property damage from seismically induced and other known geologic hazards. Regulate land use and apply development standards and construction practices to reduce the risk to humans and property in the event of an earthquake or other geological activity.
- Policy SN1.A** **Earthquake Fault Zone.** Utilize the existing Alquist-Priolo Earthquake Zone Maps to guide the location of development and utilities to safe areas, and enforce use restrictions where necessary. Where development is proposed within the zone, require study of potential impacts related to fault movement in the design of all structures, roadways, utility lines, and other facilities.
- Policy SN1.B** **Building Structure Safety Standards.** Regularly review and update building standards and guidelines to ensure that all structures in private, public, or quasi-public ownership, including municipal buildings, are designed to protect people and property from hazards.
- Policy SN1.C** **Geotechnical Review Guidelines.** Regularly review and update geotechnical review guidelines for major redevelopments or new developments to determine the degree of seismic and geologic hazards that might be expected for a particular structure or location. Guidelines should require site-specific geotechnical studies on a case-by-case basis for projects proposed to be built on, or adjacent to, inactive bedrock faults or other potential geologic hazards including geologic anomalies, slope instability, or other potentially hazardous conditions. Ensure that the investigation is performed by technically qualified staff.
- GOAL SN3** **Emergency Preparedness.** Develop effective mechanisms for a coordinated response to emergencies and natural disasters to best protect residents, businesses, and the environment.

4.6.3 ENVIRONMENTAL SETTING

Information provided in this section is derived from a number of sources including USGS maps and publications, the CGS, a site-specific geotechnical investigation report prepared in 2006 (Appendix I of 2011 FEIR), a historic building structural assessment performed in 2007 (Appendix E of 2011 FEIR), a Phase I Environmental Site Assessment (Phase I; **Appendix G**), a geotechnical feasibility memorandum (**Appendix R**), and a preliminary grading report (**Appendix I**). This analysis focuses on the manner in which development could alter the Project Site under baseline conditions, which are defined for the purposes of the analysis in this section as physical conditions on or around the publication of the Notice of Preparation (NOP) in July 2019. Since the publication of the 2011 FEIR, there have been changes to the soils during remediation efforts. These changes are described in **Section 4.6.3.3** below.

4.6.3.1 Topography

The topography of Contra Costa County includes hilly and mountainous areas, such as the San Pablo Ridge and Mount Diablo, as well as low-lying regions throughout. The topography of the Project Site exhibits the characteristics of both the uplands in the coastal range and the tidal flats of the Bay. As shown in **Figure 3-7**, elevations on the Project Site range from mean sea level, along the western shoreline of the Project Site, to approximately 350 feet above mean sea level along the crest of the Potrero Ridge, which forms the eastern border of the Project Site. The slopes on the Project Site range from relatively flat within the open shoreline areas to over 30 percent along the steep hillsides of the Potrero Ridge.

4.6.3.2 Geology

The Project Site is located in the Coast Ranges geomorphic province of California. The Coast Ranges province lies between the Pacific Ocean and the Great Valley of California and stretches from the Oregon border to the north and continues south to the Santa Ynez River near Santa Barbara. The northern and southern portions of the province are divided by a depression containing the Bay. Much of the Coast Range province is characterized by northwest trending mountain ranges, ridges, and valleys composed of the Franciscan Complex (California State Parks, 2015). The Franciscan Complex forms the bedrock of the Project Site, specifically Franciscan sandstone and shale (**Appendix R**).

4.6.3.3 Soils

During the past century, mud flats along the shoreline have been artificially filled to create the low-lying areas of the Project Site (**Appendix G**). Virtually all fills in the Bay region have been placed on top of soft sediments known as “Bay Mud” (BCDC, 2019).

The Natural Resources Conservation Service (NRCS) maps soil properties on a broad scale in Web Soil Survey. There are two NRCS soil classifications on the site: Millsholm Loam (MeG) and Urban Land (Ub). Distribution of these soil types is shown in **Figure 4.6-1**.

MeG (Millsholm Loam) –The MeG series of soil covers most of the Project Site. Millsholm Loam is typically a well-drained soil formed from sandstone and shale. Millsholm Loam is classified as hydrologic group D, which includes soils that have a very slow water infiltration rate when thoroughly wet and a very slow rate of water transmission. Hydrologic group D soils primarily consist of clays that have a high shrink-swell potential (classified as expansive), soils that have a high water table, soils that have a clay pan or clay layer at or near the surface, and soils that are shallow and located over nearly impervious material. Because of the clay content and steep slopes, these soils have a high rate of surface water runoff and thus severe erosion potential. Additionally, this soil has a moderate potential to corrode concrete and steel (NRCS, 2019).

Ub (Urban Land) –The soils in areas designated as Ub have been so modified that the maps no longer provide accurate information.



SOURCE: USDA NRCS Soil Survey of Contra Costa County, updated 9/17/2019;
DigitalGlobe Aerial Photograph, 8/31/2017; AES,

Point Molate Mixed-Use Development SEIR / 216544 ■

Figure 4.6-1
Soil Types

A site-specific geotechnical investigation was performed by Engeo Incorporated of Vallejo, CA in 2006 (Appendix I of the 2011 FEIR), which focused on an area of the Project Site that is now Planning Area A. The scope of the investigation included field explorations to collect soil borings, excavation of soil test pits, and laboratory analysis of materials collected during the field activities. On December 23, 2005, five exploratory test borings were drilled within Planning Area A of the Modified Project to depths ranging from 16.5 feet below ground surface (bgs) to 41 feet bgs. Soil samples from the borings were retained for laboratory analysis. The results of the investigation, including boring logs, are included in the geotechnical report. Soil borings collected onsite consisted of sandstone, siltstone, and shale. According to the laboratory results, on-site soils are composed of stiff to hard silty clays and clayey silts with variable amounts of gravel. The laboratory analysis determined the clayey soils to be moderately expansive. Fill materials were encountered in all five exploratory borings, as well as five of the 10 exploratory test pits. The depth of undocumented fill ranged between 2.5 feet and 9 feet. The fill materials appear to have been placed primarily in the southwestern portion of the site (Appendix I of 2011 FEIR). Based on mapping by the U.S. Navy (Navy), there is also existing fill in Planning Areas D, E, F, G, and H, although the thickness of this fill is unknown (**Appendix R**).

Beginning in 1987, the Navy initiated a series of environmental characterization activities, including a Preliminary Assessment at the Point Molate Naval Fuel Depot. Follow-up site inspections and investigations were conducted in the early 1990s, resulting in the identification of several areas that were included in the Installation Restoration (IR) Program; these areas are referred to as IR Sites.

Since the 2011 FEIR, remedial activities were completed between the Winehaven building area and the shoreline, an area identified as IR Site 3. Between 2014 and 2015, approximately 100,000 cubic yards of petroleum-contaminated soils were excavated to depths up to 20 feet bgs and replaced with clean fill material (**Appendix G**). Any imported fill material was tested for contamination as described in the Phase I (**Appendix G**; Terraphase Engineering, 2019). Specifically, this remediation work included: excavation and off-site disposal of contaminated soils, demolition of existing above and belowground facilities, installation of a contingency groundwater extraction trench (clean gravel wrapped with a non-woven geotextile to a depth of two feet into the Bay Mud), installation of seven groundwater extraction/monitoring wells, and backfilling with clean material (**Appendix G**).

The Regional Water Quality Control Board issued a letter in February 2019 concurring that remedial action objectives were generally met, but official regulatory approval had not yet been granted and the site required additional remediation for groundwater. More information regarding potential soil contamination on the Project Site can be found in **Section 4.7 Hazards, Wildfire, and Hazardous Materials**.

4.6.3.4 Seismicity

Faults

The Bay Area is a seismically active region with many active or potentially active faults, as shown in **Figure 4.6-2**. Faults are usually considered active if they have moved one or more times in the past 10,000 years (USGS, n.d.). Large earthquakes have historically occurred in the region and many earthquakes of low magnitude occur every year (**Appendix R**). The three largest known faults in the

vicinity of the Project Site are the Hayward-Rogers Creek Fault approximately 4 miles away, the San Andreas Fault approximately 14 miles away, and the Calaveras Fault approximately 25 miles away. These three faults are within the San Andreas Fault Complex.

4.6.3.5 Seismicity

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The San Andreas Fault Complex is a major dextral strike-slip (horizontal) fault zone that extends for approximately 800 miles along most of coastal California. The San Andreas Fault Complex accommodates the relative north-south motion between the Pacific tectonic plate and the North American tectonic plate (USGS, 2016). The Hayward-Rogers Creek Fault extends from San Jose for approximately 74 miles north, along the western region of the East Bay Hills, to the San Pablo Bay. South of the Bay Area, the Hayward-Rogers Creek Fault and the Calaveras Fault merge into the San Andreas Fault. The Calaveras Fault is considered to be a historically active major dextral strike-slip fault that extends for approximately 93 miles from the San Ramon area southeast to approximately 19 miles south of Hollister. No faults are located within the Project Site, nor is the Project Site within an Alquist-Priolo Fault Zone (**Appendix R**). As shown in **Figure 4.6-2**, there is one inactive fault line located approximately 0.5 miles away from the Project Site.

Ground Shaking

The Richter Scale is the best known scale for measuring the magnitude of earthquakes. The scale has a logarithmic base, so an earthquake with a recording of Magnitude 7 signifies a disturbance with ground motion 10 times as large as an earthquake with a recording of Magnitude 6. However, each whole number step in the magnitude scale corresponds to the release of about 32 times more energy than the amount associated with the preceding whole number value. Seismologists also designed a "moment magnitude" scale to be consistent with the Richter scale while providing a measure that differentiates between the largest earthquakes. Consequently, the Richter scale is still used but more precise measurements such as moment magnitude are now used to calculate the magnitude of an earth-shaking event (Michigan Tech, 2007).

There are three faults that are estimated to have over a 20 percent chance of producing a magnitude 6.7 or greater earthquake in the Bay Area between the years 2014 and 2043. The Hayward-Rogers Creek Fault has the highest probability at 33 percent. The Calaveras and San Andreas Faults have the next highest probabilities at 26 percent and 22 percent, respectively (Association of Bay Area Governments [ABAG], 2017a). Overall, the probability of a magnitude 6.7 or greater earthquake in the Bay Area between 2014 and 2043 is 72 percent (ABAG, 2017a).

Ground shaking severity at the Project Site would depend on the distance from the fault rupture, the magnitude of the earthquake, and the site-specific soil conditions. Soft alluvial soils can create a heightened risk of ground shaking. The General Plan includes a map of alluvium thickness to indicate seismic shaking potential. The Project Site is mapped as zone A, indicating lower potential for ground shaking (City of Richmond, 2012).

Liquefaction

Soil liquefaction results from loss of strength during cyclic loading, such as imposed by earthquakes. The soil considered most susceptible to liquefaction is clean, loose, saturated, and uniformly graded fine-grained sand; research indicated that low-plasticity silt and clay is also potentially subject to liquefaction (or cyclic-softening under the ideal circumstances). (**Appendix R**)

The 2006 geotechnical report by Engeo Incorporated concluded that the risk of liquefaction was low in the areas surveyed, which is primarily Planning Area A of the Modified Project (Appendix I of the 2011 FEIR). However, based on the CGS Liquefaction Susceptibility Map (2019a), the low-lying areas of the Project Site adjacent to the Bay are mapped as having a “moderate to very high” susceptibility to liquefaction and the upland areas are shown as having a “very low” susceptibility to liquefaction (refer to **Figure 4.6-3**). This liquefaction susceptibility mapping is based on regional geologic mapping of soil and rock deposits and is not based on site-specific exploration or analyses.

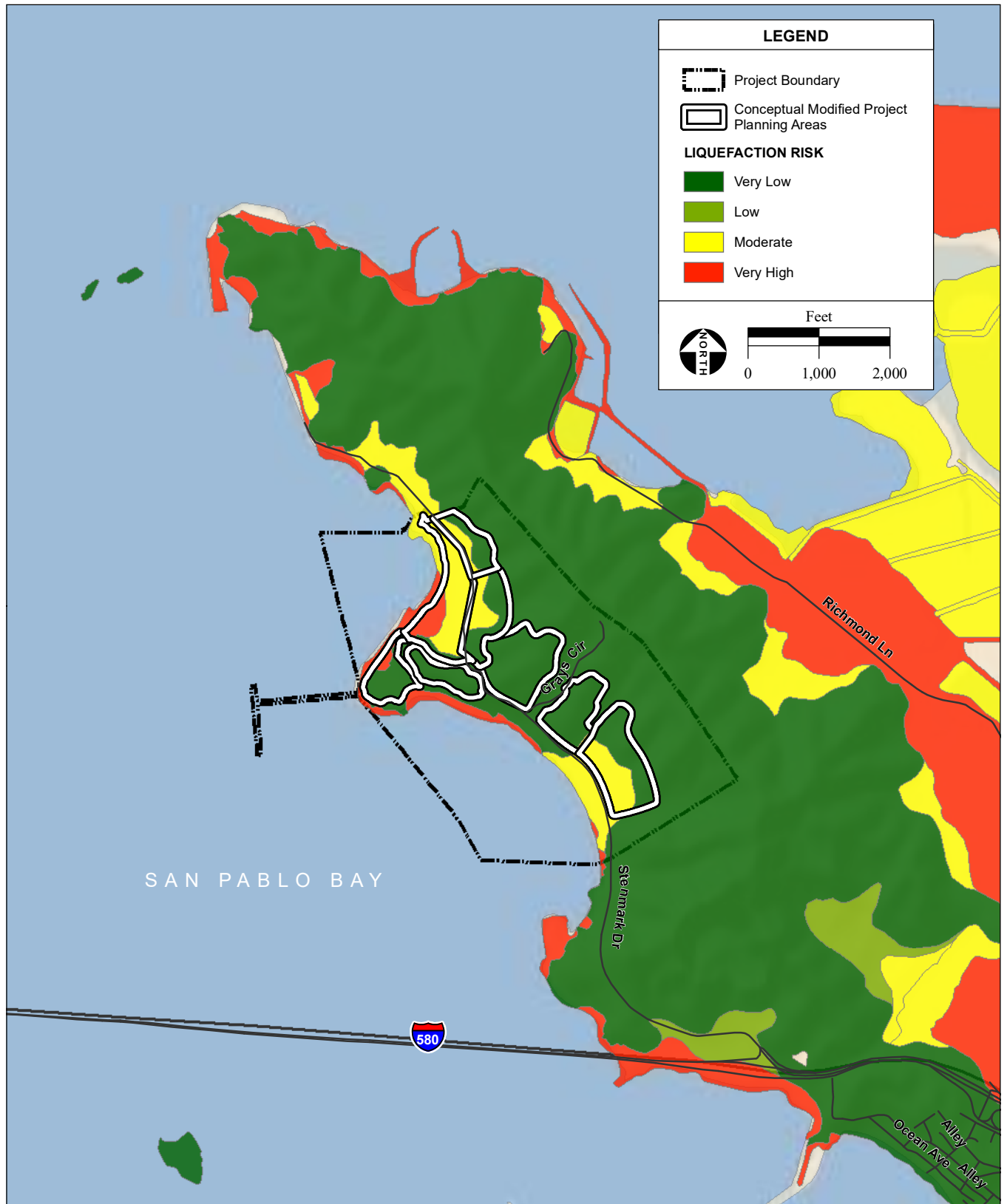
Lateral Spreading

Lateral spreading is a failure within a nearly horizontal soil zone (possibly due to liquefaction) that causes the overlying soil mass to move toward a free face or down a gentle slope. If the low-lying areas of the site are determined to have a potential liquefaction hazard, then these areas could also have a lateral spreading hazard. The 2006 geotechnical investigation report (Appendix I of the 2011 FEIR) concluded that lateral spreading potential was low in the vicinity of Planning Area A due to the lack of slopes in this area and the stiff clay soil types. **Appendix R** indicates that lateral spreading would not likely extend into Modified Project development areas except for in Planning Areas D1, D2, and E.

Landslides

Landslides and resulting mudflows, if initiated by water-saturated soils, generally occur along slopes that are unstable as a result of several factors. A landslide is also called a slip surface, which is defined as the point (usually a sloped surface) where the loss of soil cohesion occurs, usually caused by excessive rainfall and/or saturated soils conditions. If the slip surface is relatively deep, the result could be loss of an entire hillside.

The upland areas of the Project Site have the greatest potential for landslides. The Regional Landslide Map presented in Figure 4 of **Appendix R** shows shallow landslides and colluvium mapped on the Project Site. Shallower, surficial landslides typically consist of rock fragments and soil. Deep-seated bedrock landslides could also be present on the Project Site. Geologic mapping and exploration would be necessary to delineate actual shallow landslides and identify deep-seated landslides. Colluvial soil deposits mapped along the side slopes may be subject to instability and slope creep as well.



SOURCE: California Geological Survey, 2019; AES, 2/6/2020

Point Molate Mixed-Use Development SEIR / 216544 ■

Figure 4.6-3
Liquefaction Susceptibility

The General Plan includes a landslide potential map. The Project Site is mostly designated Category 3 – Generally Stable to Marginally Stable, which means that it is an area with greater than a 15 percent slope but is not underlain by landslide deposits or bedrock units susceptible to landslides. This map also shows small landslide deposits around the Project Site.

4.6.3.6 Mineral Resources

The main commodity mined in the City has been construction aggregate such as sand and gravel. However, the only two quarries in the City with recent production have been closed and no quarry operations are anticipated in the future (City of Richmond, 2012; City of Richmond, 2016a). The Richmond Quarry, also known as the Chevron® Quarry, was adjacent to the southeast border of the Project Site. Mineral extraction activities ceased in 1987 and the site has since been reclaimed. The site is currently used to store petroleum tanks (City of Richmond, 2016a). Additionally, there are no significant aggregate resource areas designated by the State Division of Mines and Geology on the Project Site (DOC, 1996).

4.6.3.7 Paleontological Environmental Setting

The presence of paleontological resources at any particular site is influenced by geological composition resulting from formation processes occurring over long periods of time. Fossils typically reside in sedimentary layers, and may or may not become mineralized dependent upon the mineral composition within their depositional environment.

As discussed above, the geology of the Project Site is dominated by Franciscan formation out-crops composed of sandstone, serpentine, chert, shale, greenstone, and metamorphic rocks. Imported fill materials are present along the Bay margin and are composed of a highly variable mix consisting of poorly sorted gravel, silt, sandy silt, sandy clay, and bedrock fragments. The fill materials have been placed over Bay Mud and marsh deposits along the shoreline areas. Significant fossil resources rarely occur in the Franciscan formation, due to the heavily deformed and metamorphosed nature of the materials. However, fossiliferous components containing primarily invertebrate marine fossils have been identified within the Franciscan complex.

A search of the University of California Museum of Paleontology's (UCMP) database indicates that 20,069 paleontological specimens have been reported in Contra Costa County (County; UCMP, 2020). Areas in proximity to Mount Diablo have the highest frequency of fossils in the County, and nearly all reported vertebrate and mammalian specimens are from this locale. Regionally, the most prolific producers of important paleontological specimens are the Blackhawk Ranch Fossil Quarry, located roughly 35 miles southwest of the Project Site on the southern flank of Mount Diablo. The quarry contains the Bay Area's richest deposit of plant and animal fossils, including numerous vertebrate specimens. The UCMP lists more than 3,000 specimens collected from this quarry. The fossiliferous deposit, which dates to roughly nine to 10 million years ago, has produced a number of simpsoni (precursor of mastodons and elephants), beavers, mice, squirrels, foxes, hayaenoid dogs, saber-toothed cats, skunks, weasels, otters,

horses, camels, rhinoceros, llamas, antelope, salmon, turtles, and cranes. Plant fossils recovered from the site include leaves of poplar, willow, oak, elm, sycamore, mahogany, and sumac.

Specimens reported from the immediate area include two fossils from the Potrero Hills, as well as two from Point Molate. The two specimens reported from Point Molate are invertebrate fossils that date to the Holocene epoch (most recent ~10,000 years), while the two specimens from an undefined area in the Potrero Hills are invertebrates from the Eocene and Paleocene epochs (34 – 55 million and 60 – 66 million years ago, respectively) (UCMP, 2020).

Paleontological Summary

Despite a handful of invertebrate fossil specimens documented within and near the Project Site, indicators of *unique paleontological resources* within the Project Site are absent in the sources consulted, and no such resources were observed in the course of a surface reconnaissance survey performed in 2007 by archaeologists from Analytical Environmental Services. The geologic formation upon which the Project Site is located has produced few significant paleontological specimens of scientific consequence and thus would not be likely to yield unique paleontological resources. Furthermore, no unique geologic features are known to exist within the Project Site.

4.6.4 2011 FEIR ANALYSIS

This section provides a summary of the impacts to geology, soils, and mineral conditions analyzed for the Casino Project of the 2011 FEIR, followed by a description of any changes since the 2011 FEIR that relate to geology, soils, and mineral resources.

4.6.4.1 2011 FEIR Summary of Impacts

Impacts

In the 2011 FEIR, the Casino Project was determined to have the potential to result in soil erosion and loss of topsoil on the Point Molate Site. This was a potentially significant impact. Mitigation was identified in the 2011 FEIR to reduce these impacts. These mitigation measures included preparation of a SWPPP, a grading permit application, and implementation of erosion control and stormwater management features consistent with Bay Plan policies. The 2011 FEIR also determined that the Casino Project had the potential to build on unstable and expansive soils and in a seismically active region that could have resulted in a substantial risk to life or property. These were potentially significant impacts. Mitigation included preparation of a geotechnical report with design-grade specifications, engineering standards, and design requirements to reduce seismic impact risk. Further mitigation measures required in the 2011 FEIR for seismic risk were in compliance with the CBC, the City Building Code, and the requirements for retrofitting of historic buildings. These mitigations measures would have reduced these impacts to less-than-significant levels. The Casino Project would not have impacted a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. Therefore, the 2011 FEIR determined that no impact would occur.

In the 2011 FEIR, impacts to unique paleontological and geological resources were evaluated in cultural resources (Section 4.6 of the 2011 FEIR). For the Casino Project, impacts were determined to be less than significant with incorporation of mitigation for inadvertent discovery of unknown paleontological resources.

Cumulative Impacts

The 2011 FEIR determined in the cumulative impact analysis that the Casino Project in combination with other development projects in the City and County would have had localized impacts to topography and soil attrition. However, it was assumed other development projects would also follow local, state, or federal permitting procedures, including implementation of a SWPPP; therefore, the Casino Project would not result in significant cumulative impacts related to soils or geology.

4.6.4.2 Changes Since the 2011 FEIR

Since the 2011 FEIR, approximately 100,000 cubic yards of contaminated soil have been excavated, and new clean fill materials have been placed onsite.

Appendix G of the CEQA Guidelines significance thresholds have remained primarily the same since 2011 with two additional significance thresholds added. One significance threshold pertains to paleontological and unique geological features, and the other pertains to the building of wastewater facilities/disposal systems on soils suitable for development.

A new General Plan was adopted in 2012 that reorganized and reworded the content pertaining to geological and mineral issues. The primary changes to content concern geological issues. There are now additional policies concerning safety for seismic hazards included in the General Plan. Furthermore, policies pertaining to mineral resources underwent slight changes, including a decrease in the number of policies concerning the collection procedures for mineral resources. The analysis below considers these new policies.

4.6.5 IMPACTS

4.6.5.1 Thresholds of Significance

Criteria for determining the significance of impacts to visual resources have been developed based on Appendix G of the CEQA Guidelines and relevant agency thresholds. Impacts associated with geology, soils, and mineral resources would be considered significant if the Modified Project would:

- directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure including liquefaction, or landslides;
- result in substantial soil erosion or the loss of topsoil;
- be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse;

- be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property;
- have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater;
- directly or indirectly destroy a unique paleontological resource or site or unique geologic feature;
- result in the loss of availability of a known mineral resource that would be of value to the region and residents of California; or
- result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.

4.6.5.2 Method of Analysis

This section identifies any impacts related to geology and soils, including mineral resources that could occur from construction and operation of the Modified Project. Impacts were analyzed based on a review of maps, site plans, field studies, a preliminary geotechnical memo (**Appendix R**), relevant regulations as described in **Section 4.6.2**, and published information regarding the Project Site. This analysis focuses on the manner in which development could affect geology, soils, or mineral resources on or near the Project Site compared to baseline conditions, which are defined for the purposes of the analysis in this section as the physical conditions in the vicinity of the study area on or around the publication of the NOP in July 2019. The development footprint square footage is the same under both Option 1 and Option 2 of the Modified Project; thus for the analysis in this section, there is no distinction between the two options. Where it is concluded that impacts to geology, soils, or mineral resources resulting from the Modified Project would exceed the significance thresholds listed above, mitigation measures are identified to reduce impacts to less-than-significant levels.

4.6.5.3 Effects Found Not to be Significant Without Further Analysis

Review and comparison of the existing setting conditions and the Modified Project characteristics with the significance criteria clearly show that no impacts would be associated with the following criteria for the reasons stated below for each.

The Modified Project would not require soils capable of supporting septic tanks.

The Modified Project does not include any septic tanks and sewers would be available for the disposal of wastewater; therefore, no impact from the use of septic systems would occur.

The Modified Project would not impact mineral resources.

As mentioned in **Section 4.6.3**, the Project Site is not located in a known mineral resource area or recovery site delineated in the General Plan or by the State Division of Mining and Geology. Therefore, there is no impact related to mineral resources.

4.6.5.4 Project-Level Impacts

IMPACT 4.6.1	DIRECTLY OR INDIRECTLY CAUSE POTENTIAL SUBSTANTIAL RISK OF LOSS, INJURY OR DEATH DUE TO SEISMIC RELATED HAZARDS
Significance Before Mitigation	Potentially Significant
Mitigation Measures	Modified Project Mitigation: MM 4.6-1
Significance After Mitigation	Less Than Significant
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

Project Site

As mentioned above, there are no active faults that cross the Project Site, therefore fault rupture through the Project Site is not anticipated. Further, construction and operation of the Modified Project would not cause or increase the severity of earthquake fault ruptures, seismic ground shaking, seismic-related ground failure, or landslides. The Modified Project development would include grading of hillslopes. All cuts into hillslopes would be approved by a City Building Official before a grading permit is granted. Per the City's Excavation, Grading, and Earthwork Construction Ordinance, fill would not create an exposed surface steeper than a horizontal to vertical ratio of 2:1 and not be placed on a cut or natural slope steeper than a horizontal to vertical ratio of three to one. These restrictions would reduce the risk of landslides in the event of an earthquake.

However, the Project Site is likely to experience a magnitude 6.7 earthquake or greater in the next 25 years. This magnitude may cause considerable ground shaking at the Project Site and serious structural damage, which is a potentially significant impact. All buildings, existing and new, on the Project Site would comply with current industry standard geotechnical practices and seismic structural design according to the 2019 CBSC. The CBSC provisions are intended to safeguard public health, safety, and general welfare.

The current condition of several buildings located within the Winehaven Historic District present the risk of loss, injury, or death from collapse during strong seismic activity. In particular, historic Buildings No. 1, 6, and 13 present the greatest risk of structural failure due to their advanced state of disrepair. General recommendations for seismic retrofit and structural reinforcement are presented in a Historic Building Structural Assessment Report (Appendix E of 2011 FEIR). The recommendations include, but are not limited to, a seismic retrofit according to the CBSC and FEMA NEHRP standards.

Based on the CGS (2019a) liquefaction map, the majority of the potentially liquefiable soil is mapped outside of Planning Areas B, C, and D (refer to **Figure 4.6-3**). However, some areas mapped as having a moderate to very high potential for liquefaction encroach into Planning Areas A, E, F, G, and H. This liquefaction susceptibility mapping is based on regional geologic mapping of soil and rock deposits and is not based on site-specific exploration or analyses. As described above, areas susceptible to liquefaction are likely also susceptible to lateral spreading. Thus, these Planning Areas must also be evaluated for

lateral-spreading potential. Additionally, there may be landslides on the Project Site. **Mitigation Measure 4.6-1** includes a requirement for a final geotechnical evaluation, which would be performed by a registered engineer and would determine if development areas include soil that has potential for liquefaction, lateral spreading, and landslides. The geotechnical evaluation and the recommendations therein would be to CBSC and ASCE 7 structural design standards and would incorporate the guidelines from CGS Special Publication 117A for seismic hazards.

Appendix R provides a number of recommendations for site preparation, designed to prevent risks related to fault-related ground rupture, lateral spreading, liquefaction, and landslides, should these issues be identified in the final geotechnical evaluation (**Appendix R**). These measures are included in **Mitigation Measure 4.6-1**. Compliance with the CBSC and the City's Excavation, Grading, and Earthwork Construction Ordinance, and incorporation of **Mitigation Measure 4.6-1** would ensure potential impacts related to risk of loss, injury, or death from seismic hazards are less than significant.

Construction of the Bay Trail

Impacts as a result of the construction and implementation of the San Francisco Bay Trail (Bay Trail) are analyzed within the San Francisco Bay Trail at Point Molate Initial Study/Mitigated Negative Declaration (IS/MND), which is incorporated by reference, as described within **Section 1.4.4**. The Bay Trail IS/MND determined that impacts from the construction of the Bay Trail on the risk of loss, injury, or death due to seismic-related hazards were less than significant because there are no known faults, proposed buildings, or deep-seated slope instability. As a result, construction of the Bay Trail would not result in substantial risk of loss, injury, or death due to seismic-related hazards and the impact would be less than significant.

Off-Site Improvements

In addition, the Modified Project includes an off-site pipeline expansion and widening of Stenmark Drive. As described in **Section 3.4.6.2**, there are two wastewater treatment options. Under Wastewater Treatment Variant A, the Modified Project would include the construction of an on-site WWTP with an associated pipeline along an approximately two-mile segment of Stenmark Drive. Under Wastewater Treatment Variant B, the Modified Project would connect to the existing sewer system of the City through one of two optional alignments (Variant B1 or Variant B2) shown on **Figure 3-20**, both of which would connect to the City's system near the intersection of Tewksbury Avenue and Contra Costa Street. These improvements would also be built according to CBSC provisions, the City's Excavation, Grading, and Earthwork Construction Ordinance, and CGS Special Publication 117A. Specifically, CGS Special Publication 117A includes methods for reducing liquefaction and seismically induced landslide hazards. As a result, construction of the proposed off-site improvements would not result in substantial risk of loss, injury, or death due to seismic-related hazards and the impact is less than significant.

IMPACT 4.6.2	SUBSTANTIAL SOIL EROSION OR LOSS OF TOPSOIL
Significance Before Mitigation	Significant
Mitigation Measures	Modified Project Mitigation: MM 4.8-1 Bay Trail IS/MND Mitigation: GEO-1; GEO-2
Significance After Mitigation	Less than Significant
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

Project Site

The NRCS Web Soil Survey map shows that the majority of the Project Site has a severe potential for erosion (refer to **Section 4.6.3.3**). This is likely due to the steep slopes and low infiltration rate on the Project Site. Areas proposed for construction and development are not anticipated to occur on steep slopes; therefore, erosion potential is lower but still high. As part of the Modified Project, approximately 300,000 cubic yards of soil would be exported and corrective grading would not exceed a slope of 2:1 to accommodate project components (**Appendix I**). While many of the affected areas have already been disturbed by previous development, potential impacts would occur if disturbed areas are not stabilized with temporary erosion control measures. Such impacts would be prevented through the implementation of BMPs for erosion control and a site-specific SWPPP for temporary impacts during construction as required by an NPDES General Construction Permit. The City's Excavation, Grading, and Earthwork Construction Ordinance requires preparation of interim and final Erosion and Sediment Control Plans, including construction and permanent erosion control measures. Refer to **Section 4.8** for additional information regarding SWPPP (**Mitigation Measure 4.8-1**) and Low Impact Development (LID) feature implementation and avoidance of potential impacts from sediment-laden stormwater transported offsite. With compliance with the City's Excavation, Grading, and Earthwork Construction Ordinance and the NPDES Construction General Permit and implementation of **Mitigation Measure 4.8-1**, impacts related to soil erosion or loss of topsoil would be less than significant.

Construction of the Bay Trail

Impacts as a result of the construction and implementation of the Bay Trail are analyzed within the Bay Trail IS/MND, which is incorporated by reference, as described within **Section 1.4.4**. The Bay Trail IS/MND determined that impacts from the construction of the Bay Trail on soil erosion and loss of topsoil were less than significant after mitigation because during construction, portions of the site would have exposed soil areas that if exposed to rain or high wind events could cause erosion. The Bay Trail IS/MND identified **Mitigation Measures GEO-1** and **GEO-2**, described in **Section 4.6.6**, that would reduce the impacts to less-than-significant levels by developing and implementing a SWPPP. A SWPPP identifies pollution control practices designed to minimize erosion during construction, stabilize construction areas, control sediment, control pollutants from construction materials, and address post construction runoff quantity (volume) and quality (treatment). As a result of the construction of the Bay Trail and implementation of **Mitigation Measures GEO-1** and **GEO-2**, impacts related to soil erosion or loss of topsoil would be less than significant with mitigation.

Off-Site Improvements

Construction of the off-site improvements would occur on previously disturbed and paved roadways. There would be no increase in erosion associated with runoff. However, during construction, the soils would be exposed and potentially erode. The off-site improvements would also be required to obtain an Erosion and Sediment Control Plan and a SWPPP, including the BMPs in **Mitigation Measure 4.8-1**. With the implementation of **Mitigation Measure 4.8-1**, impacts related to soil erosion would be less than significant.

IMPACT 4.6.3	DEVELOPMENT ON UNSTABLE SOIL
Significance Before Mitigation	Potentially Significant
Mitigation Measures	Modified Project Mitigation: MM 4.6-1; MM 4.6-2
Significance After Mitigation	Less Than Significant
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

Project Site

Fill materials and soft Bay Mud sediments present along the low-lying western portions of the Project Site could create unstable soil conditions and potentially cause landslides, lateral spreading, subsidence, liquefaction, or collapse. Fill materials are located at depths ranging from approximately 3.5 to 9 feet bgs. Specifically, portions of development areas A, D, E, F, G, and H are proposed for portions of the Project Site known to contain fill material (**Appendix R**). The presence of undocumented, non-engineered fill materials could create unstable soil conditions and subsequently cause settlement of a building or landslides associated with the development of the Modified Project. This is a potentially significant impact. **Mitigation Measure 4.6-1** includes a requirement that a final design-level geotechnical report be performed to determine the stability of soil underneath development and identify site-specific measures to address lateral spreading, subsidence, liquefaction, or collapse. The geotechnical report would be required to be reviewed and approved by a California-registered geotechnical engineer or engineering geologist and submitted to the City for review. Modified Project development would comply with the standards present in the CBSC applicable to building on potentially unstable soils. Recommendations from the preliminary geotechnical memo are incorporated into **Mitigation Measure 4.6-1** to prevent hazards associated with potentially unstable soils (see **Section 4.6.6**). These features include removing landslide debris, colluvium, and unstable fill, and replacing with engineered fill and stabilization of liquefiable soil. Additionally, the geotechnical memo recommended temporary dewatering during construction and permanent foundation subdrainage to increase stability. This recommendation is included as **Mitigation Measure 4.6-2**. Compliance with the CBSC, and incorporation of **Mitigation Measures 4.6-1** and **4.6-2** ensure that there would be less-than-significant impacts associated with development on unstable soils.

Construction of the Bay Trail

Impacts as a result of the construction and implementation of the Bay Trail are analyzed within the Bay Trail IS/MND, which is incorporated by reference, as described within **Section 1.4.4**. The Bay Trail IS/MND determined that impacts from the construction of the Bay Trail as it pertains to unstable soils were less than significant because the proposed section of Bay Trail is not located within an unstable geologic unit. As a result, impacts related to unstable soils resulting from the construction of the Bay Trail would be less than significant.

Off-Site Improvements

Development of off-site infrastructure improvements could also occur on unstable soils. This development would also comply with the CBSC and the City's Excavation, Grading, and Earthwork Construction Ordinance; therefore, impacts related to unstable soils would be less than significant.

IMPACT 4.6.4	DEVELOPMENT ON EXPANSIVE SOILS
Significance Before Mitigation	Potentially Significant
Mitigation Measures	Modified Project Mitigation: MM 4.6-1
Significance After Mitigation	Less Than Significant
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

Project Site

As indicated in the 2006 site-specific geotechnical study (Appendix I of the 2011 FEIR) and on the NRCS Web Soil Survey application, the Project Site has potentially expansive soils. Expansive soils shrink and swell, which can cause cracking of foundations and pavement as well as potential damage to project-related site improvements. This is a potentially significant impact. **Mitigation Measure 4.6-1** includes preparation of a final design-level geotechnical report and incorporation of any recommendations in the report. Additionally, where expansive soils are identified, the mitigation measure requires that building damage due to volume changes shall be reduced through the use of mat foundations, deepening foundations, or engineered fill. Compliance with the applicable standards in the CBSC and **Mitigation Measure 4.6-1** ensures impacts associated with development on potentially expansive soils would be less than significant.

Construction of the Bay Trail

Impacts as a result of the construction and implementation of the Bay Trail are analyzed within the Bay Trail IS/MND, which is incorporated by reference, as described within **Section 1.4.4**. The Bay Trail IS/MND determined that impacts from the construction of the Bay Trail on the Project Site as it pertains to expansive soils were less than significant because of the Millsholm loam located at the Project Site, which due to its compact nature, has low expansion potential. As a result, impacts related to expansive soils resulting from the construction of the Bay Trail would be less than significant.

Off-Site Improvements

Off-site improvements may also be developed on expansive soils. These improvements would comply with the standards in the CBSC; therefore, impacts related to expansive soils would be less than significant.

IMPACT 4.6.5	DESTRUCTION OF A UNIQUE PALEONTOLOGICAL RESOURCE OR SITE OR UNIQUE GEOLOGIC FEATURE
Significance Before Mitigation	Potentially Significant
Mitigation Measures	Modified Project Mitigation: MM 4.6-3
Significance After Mitigation	Less Than Significant
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

No unique paleontological or geological resources are known to exist within the Project Site or within the corridors of the off-site improvements. As discussed in **Section 4.6.3.6**, geologic formations that underlie the Project Site have a low probability of containing paleontological resources. Additionally, the off-site improvements would occur along existing roadways; therefore, no impacts are expected. However, there is a possibility that unknown paleontological resources would be encountered during construction activities. Continued construction upon exposed paleontological materials would likely cause destruction of these resources. This would be a potentially significant impact.

The implementation of **Mitigation Measure 4.6-3**, which requires consultation on any finds by a qualified paleontologist and the appropriate agencies, would reduce these impacts to a less-than-significant level.

4.6.5.5 Cumulative Impacts

IMPACT 4.6.6	CUMULATIVE GEOLOGY AND SOILS IMPACTS
Significance Before Mitigation	Less Than Significant
Mitigation Measures	None Required
Significance After Mitigation	Not Applicable
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

The cumulative setting is described in detail within **Section 5.0**, CEQA Considerations. The geographic scope of this cumulative analysis is the City and western portion of the County, although the most direct impacts would occur on the San Pablo Peninsula as it is geographically separated from the rest of the City. The only other development on the San Pablo Peninsula is the Bay Trail. This development and

other developments in the region would be assumed to comply with the NPDES Construction General Permit, including preparation of a SWPPP, and local grading ordinances. These developments would also be required to comply with the CBSC, including seismic safety requirements and completion of site-specific geotechnical evaluations. Local permitting requirements for construction would address regional stormwater, geotechnical, seismic, and mining hazards. Other development projects would also follow appropriate state or federal permitting procedures; therefore, less-than-significant cumulative impacts related to geology, soils, or mineral resources would occur.

4.6.6 MITIGATION MEASURES

This section includes mitigation measures that reduce environmental impacts of the Modified Project. Mitigation measures that were identified in the 2011 FEIR have been presented in this Draft Subsequent Environmental Impact Report as appropriate; however, review of the mitigation measures identified in the 2011 FEIR determined that some measures required revisions or were not applicable to the Modified Project. New and more relevant mitigation measures are identified below. **Appendix K** provides a summary of whether each mitigation measure from the 2011 FEIR was revised, deleted, or retained and the reasoning for that determination.

MM 4.6-1 Final Design-Level Geotechnical Report

The following measures shall be implemented to prevent the loss of life or property as a result of development on unstable or expansive soils. Prior to construction of any new buildings or parking structures, a California Registered Civil Engineer or Geotechnical Engineer shall prepare a final geotechnical report that provides design-grade specifications for structural engineering of all new construction and retrofitting of historic buildings. The Project proponent shall submit the final design-level geotechnical report for the City Planning and Building Services Department for review and approval. The report must be compliant with the CBC and incorporate CGS Special Publication 117A guidelines. According to the CBC Chapter 18, the geotechnical report must include, at a minimum, the following.

- A plot showing the location of the soil investigations
- A complete record of the soil boring and penetration test logs and soil samples
- A record of the soil profile
- Elevation of the water table, if encountered
- Recommendations for foundation type and design criteria, including but not limited to: bearing capacity of natural or compacted soil; provisions to mitigate the effects of expansive soils; mitigation of the effects of liquefaction, differential settlement and varying soil strength; and the effects of adjacent loads
- Expected total and differential settlement
- Deep foundation information in accordance with CBC § 1803.5.5
- Special design and construction provisions for foundations of structures founded on expansive soils, as necessary
- Compacted fill material properties and testing in accordance with CBC § 1803.5.8

- Controlled low-strength material properties and testing in accordance with CBC § 1803.5.9

The report shall also consider the effects of seismic hazard in accordance with CBC § 1803.7.

It is the responsibility of the Project proponent to provide for engineering inspection and certification that earthwork and construction have been performed in conformity with recommendations contained in the report. All recommendations provided in the final design-level geotechnical report must comply with ASCE 7 minimum load requirements.

Recommendations made as a result of these investigations to protect new structures and reduce impacts from geological hazards shall be incorporated into project design and verified through implementation of the Mitigation Monitoring and Reporting Plan. These measures are anticipated to include requirements to construct foundations designed to resist movements of expansive soils and removal of unstable soils and replacement with suitable fill or engineered materials. Based on the geotechnical study (Appendix I of the 2011 FEIR), suitable fill material is available onsite to replace hazardous soils.

If the geotechnical report indicates the presence of critically expansive soils or other issues that could lead to structural defects, a certification of completion of the requirements of the geotechnical report shall be submitted to the City Planning and Building Services Department prior to issuance of building permits. This shall be noted on the Improvement Plans; in the conditions, covenants, and restrictions (CC&R); and on the Informational Sheet filed with the Final Subdivision Map(s). The geotechnical feasibility memo, dated September 19, 2019 and included as **Appendix R**, indicated the presence of potentially expansive soils and landslides, that must be addressed in a design-level geotechnical report. At a minimum, the following recommendations of the preliminary geotechnical feasibility memo shall be adhered to.

1. If liquefaction is identified, risks shall be avoided by not developing in those areas, by designing structures and improvements for the potential ground movement due to liquefaction, or by reducing the liquefaction hazard through ground improvement or densification. The magnitude of any potential liquefaction in development areas would be assessed prior to determining which method, if any, is needed.
2. Where landslides and colluvium overlap with planned building areas, the landslide debris or colluvium shall be removed and replaced with engineered fill. In areas where deposits lie outside development areas, there shall be a development setback from the area or construction of a toe buttress fill and debris bench. Seismically induced landslide hazards shall be reduced by using engineered stabilization of landslides and removal of colluvial deposits.
3. If lateral spreading hazards are identified, the Applicant would ensure risks are avoided by setting back development from areas subject to significant lateral

movement, stabilization of the liquefiable soil along the shoreline, or improvement to the liquefiable soil.

4. If expansive soil is identified, building damage due to volume changes shall be reduced by: (1) using a mat foundation that is designed to resist the settlement and heave of expansive soil (such as post-tensioned), (2) deepening the foundations to below the zone of moisture fluctuation, i.e., by using deep footings or drilled piers, and/or (3) using footings at normal shallow depths but bottomed on a layer of select fill having a low expansion potential.
5. Existing undocumented, non-engineered fill shall be removed and recompacted in development areas.

MM 4.6-2 Shallow Groundwater

The lower areas of the Project Site are likely to have shallow groundwater conditions. During underground construction in these areas, temporary dewatering procedures should be anticipated to lower the free water so that excavation and working areas are kept reasonably dry and stable during construction. Additionally, to reduce long-term effects from potential rises in groundwater, buildings shall be underlain by foundation subdrainage to collect and discharge accumulations of water.

MM 4.6-3 Cease Work and Consult with a Qualified Paleontologist

The potential for paleontological resources shall be addressed during cultural resources awareness training. In the event that any paleontological resources are discovered during construction-related earth-moving activities, all work within 50 feet of the resources shall halt and a qualified paleontologist or registered geologist shall be retained to assess the significance of the find. If any find is determined to be significant by the qualified professional, then appropriate agency and project representatives and the paleontologist/geologist shall meet to determine the appropriate course of action. All significant paleontological materials recovered shall be subject to scientific analysis and curation at an appropriate facility, and a paleontologist/geologist shall prepare a report according to current professional standards.

Construction of the Bay Trail

This section includes mitigation measures that reduce environmental impacts from the portion of the Bay Trail extension project that would be implemented by the Modified Project. The following mitigation measures are incorporated by reference from the Bay Trail IS/MND, as described in **Section 1.4.4**. For ease of reference, the following mitigation measures are numbered the same as in the Bay Trail IS/MND.

- GEO-1** The East Bay Regional Park District (EBRPD) or a qualified contractor shall be required to develop a SWPPP and obtain coverage under the Construction General Permit. To obtain coverage, the EBRPD shall be required to submit and certify the SWPPP and the Permit Registration Documents in the Stormwater Multiple Application Tracking and Reporting System (SMARTS) at least 14 days prior to any ground disturbance.

GEO-2 The contractor shall be required to implement the SWPPP throughout construction of the Modified Project until stabilization criteria have been met and a Notice of Termination of coverage under the Construction General Permit has been filed in SMARTS.

4.7 HAZARDS, HAZARDOUS MATERIALS, AND WILDFIRE

4.7.1 INTRODUCTION

This section provides a description of hazards and hazardous materials conditions in the vicinity of the Point Molate Site (Project Site) and describes the changes to those conditions that would result from implementation of the Point Molate Mixed-Use Development Project (Modified Project). In addition, wildfires are addressed in this section because the setting and methodology for determining impacts are similar to the significance criteria for exposure to wildland fires included within the Hazards and Hazardous Materials section of Appendix G of the California Environmental Quality Act (CEQA) Guidelines. Furthermore, the *Final Environmental Impact Report for the Point Molate Mixed-Use Tribal Destination Resort and Casino Project* (2011 FEIR) considered wildfire in the Hazards and Hazardous Materials section. Following an overview of the relevant regulatory setting in **Section 4.7.2** and the environmental setting in **Section 4.7.3**, Modified Project-related impacts and identified mitigation measures are presented in **Section 4.7.5** and **Section 4.7.6**, respectively. The hazards, hazardous materials, and wildfire impacts associated with the Casino Project and analyzed as Alternative A in the 2011 FEIR are also summarized in **Section 4.7.4** and compared to the impacts of the Modified Project.

4.7.2 REGULATORY SETTING

4.7.2.1. Federal

Comprehensive Environmental Response, Compensation, and Liability Act

On December 11, 1980, the U.S. Congress passed the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA; 42 U.S. Code [USC] § 9601, et seq.). CERCLA, also referred to as “Superfund,” provides broad federal authority to respond to potential or direct releases of hazardous substances that may jeopardize the environment or public health. CERCLA establishes prohibitions and requirements concerning closed and abandoned hazardous waste sites, provides for liability of persons responsible for releases of hazardous waste at such sites, and, when no responsible party can be identified, funds the cleanup of these sites. During site cleanup, the responsible party is required to comply with all CERCLA regulations, including tracking hazardous materials and potentially contaminated media such as soils and groundwater that are generated during site cleanup and remediation. The U.S. Environmental Protection Agency (USEPA) evaluates contaminated sites, including former U.S. Department of Defense (DoD) sites, for inclusion on a priority list and assigns a cleanup priority to sites that pose an immediate threat to the environment. The priority list, known as the National Priority List (NPL), is intended to guide the USEPA in determining which sites are given priority for further investigation. The Project Site is not listed as an NPL site.

Defense Environmental Restoration Program

The Defense Environmental Restoration Program (DERP) was established by Section 211 of the Superfund Amendments and Reauthorization Act of 1986 and is codified in Sections 2701-2707 of Title 10 of the USC. DERP is a single program, funded by several accounts, that provides for the cleanup of hazardous substances associated with past DoD activities and is consistent with the provisions of CERCLA.

Installation Restoration Program

The Installation Restoration Program (IRP) is one of the programs funded by DERP. The first step under the IRP is Remedial Investigation (RI), the purpose of which is to identify the cause and extent of contamination at a particular site and to identify potential threats to the public and the environment from such contamination. If further action is necessary, a Feasibility Study (FS) is prepared to develop the options for site cleanup. Once the RI and FS are completed, the information in the FS is used to develop a Proposed Work Plan, which is then presented as a fact sheet that describes the various cleanup options under consideration and identifies the option preferred by the responsible party. The Proposed Work Plan is distributed for public comment with public meetings held to solicit input. Following the public comment period, a Record of Decision (ROD) is submitted to the USEPA. The ROD describes how the responsible party will implement the cleanup if deemed necessary. Upon acceptance by the USEPA, public notice is given to inform the community of the cleanup decision. The ROD then becomes the governing document for future cleanup. The next steps are a series of potential human health and ecological risk assessments, corrective action plans, and removal actions when necessary. Such activities document remedial activities such as excavating impacted soils or groundwater extraction and treatment systems. The site would then progress into the operations and maintenance (O&M) phase. During this phase, review and updates occur to address the effectiveness of remedial activities, including a comprehensive evaluation of the remedial systems. These reviews may take place quarterly, bi-annually, or annually depending on the extent of the remediation systems in use. The IRP requires the entire O&M phase to be reviewed, at a minimum, once every five years.

Base Realignment and Closure Act

The Base Realignment and Closure Act of 1988 (BRAC) and Defense Base Realignment and Closure Act of 1990 (DBRAC), require the DoD, or other responsible federal agencies, to comply with a variety of environmental laws, including CERCLA and the National Environmental Policy Act, during base closure and transfer of DoD sites to non-military entities. Compliance with Section 120 of CERCLA is required for all military installations closed under BRAC and defines the role of the USEPA and appropriate state agencies during the cleanup process of such sites. The role of the USEPA in the BRAC process includes an evaluation of the property for possible inclusion on the NPL. Subsequently, DoD enters into an interagency agreement with the USEPA and appropriate state agencies to provide regulatory oversight of the cleanup process. The DoD must begin an RI and FS within a certain timeframe once the site is listed on the NPL. If a site is not listed on the NPL, the site is still required to comply with all CERCLA regulations.

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) was passed by Congress in 1976 (42 USC §§ 6901-6992k), and authorized the USEPA to control hazardous waste from generation to disposal. Furthermore, it provides a framework for managing non-hazardous wastes. The 1984 amendments to RCRA, known as the “Federal Hazardous and Solid Waste Amendments,” require a phasing out of landfill disposal of hazardous waste. The Federal Hazardous and Solid Waste Amendments require state and local governments to implement solid waste programs that ensure hazardous wastes are not disposed of in public landfills. A second amendment in 1986, addresses potential problems associated with hazardous substances, including petroleum products that are stored within underground storage tanks

(UST). RCRA requires anyone who produces or transports hazardous waste to implement a tracking system, including maintaining manifests to document the type of hazardous waste, point of origin, and ultimately the location of the disposal site where the waste is to be transferred. Any contaminated soils or groundwater that are deemed a hazardous waste would be subject to RCRA regulations. In California, the responsible agency for enforcement of RCRA is the California Department of Toxic Substances Control (DTSC).

Federal Insecticide, Fungicide, and Rodenticide Act

The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) addresses the sale, distribution, and labeling of pesticides, as well as the certification and training of pesticide applicators. The FIFRA establishes recordkeeping and reporting requirements on certified applicators of restricted use pesticides. Furthermore, FIFRA imposes storage, disposal, and transportation requirements on registrants and applicants for the registration of pesticides. Pesticide use is regulated through requirements to apply pesticides in a manner consistent with the label. The labeling requirement includes directions for use, warnings, and cautions along with the uses for which the pesticide is registered (e.g., pests and appropriate applications). This includes the specific conditions for the application, mixture, and storage of the pesticide. Additionally, the label must specify a time period for re-entry into an area after the pesticide has been applied, and when crops may be harvested after the application of the pesticide. If a pesticide is used in a manner contrary to specifics on its label, then the use constitutes a violation of the FIFRA.

Federal Hazardous Substances Act

The Consumer Product Safety Commission has a limited role in regulating hazardous substances; it primarily regulates the labeling of consumer products through the Federal Hazardous Substances Act (FHSA). The FHSA only requires products that may at some point be in the presence of residential dwellings to be labeled, including during purchase, storage, and use. These labels must alert consumers of the potential hazards of the product. However, in order for a product to be required for labeling, the product must be toxic, corrosive, flammable/combustible, an irritant, a strong sensitizer, or have the ability to generate pressure through decomposition, heat, or other means. Furthermore, the product must possess the ability to cause severe personal injury or substantial illness during or as a result of any customary or reasonably predictable handling or use, including reasonably foreseeable ingestion by children.

Toxic Substances Control Act

The Toxic Substances Control Act (TSCA), as amended by the Frank R. Lautenberg Chemical Safety for the 21st Century Act, permits the USEPA to evaluate the potential risk from novel and existing chemicals and address unacceptable risks that chemicals may have on human health and the environment. The USEPA oversees the production, importation, use, and disposal of certain chemicals. This includes the USEPA having the authority to require record-keeping, reporting, and test requirements and restrictions associated with certain chemical substances and/or mixtures. However, certain groups of chemicals are excluded from TSCA consideration, including, but not limited to, food, drugs, cosmetics, and pesticides. Examples of chemicals included in TSCA consideration are lead-based paint, asbestos, mercury, formaldehyde, and polychlorinated biphenyls (PCB).

Occupational Health and Safety Administration

The Occupational Health and Safety Administration (OSHA) helps ensure employee safety by regulating the handling and use of chemicals in the workplace, including administration of the Hazard Communication Standard (HCS). The HCS ensures safety in the workplace concerning chemicals through requiring information be provided to and understood by workers about the identity of and hazards associated with chemicals they may work with. The HCS also requires that chemical manufacturers and importers evaluate the hazards associated with the chemicals they create or import, and that these chemicals are properly labeled and have safety data sheets concerning their hazards to others (e.g., customers). Downstream of production, employers who utilize these hazardous chemicals in their workplaces are obligated to have labels and safety data sheets accessible to their workers and to train all workers on the proper handling of these chemicals.

4.7.2.2. State

Government Code § 65962.5

Originally enacted in 1985, Government Code § 65962.5 requires the California Environmental Protection Agency (Cal/EPA) to prepare a hazardous waste and substances site list, known as the “Cortese list.” A presence on the Cortese list has a bearing on local permitting processes.

Title 13 of the California Code of Regulations, Division 2, Chapter 6, Article 3, §§ 1160-1167

Article 3 within Chapter 6, Division 2, and Title 13 applies to the transportation of hazardous materials in vehicles listed in Vehicle Code § 34500 and in any other vehicle for which the display of placards is required pursuant to Vehicle Code § 27903 as prescribed in Vehicle Code § 31309. Sections 1160 to 1167 of the California Code of Regulations (CCR) sets definitions and regulations for the transport of hazardous materials in the State of California. The California Highway Patrol and California Department of Transportation (Caltrans) are the two primary state agencies responsible for enforcing the regulations specified in §§ 1160 to 1167.

Porter-Cologne Water Quality Act

The Porter-Cologne Water Quality Act is the primary law for surface and groundwater quality regulations in California. The Regional Water Quality Control Boards (RWQCB) and the State Water Resources Control Board (SWRCB) regulates surface and groundwater quality pursuant to the Porter-Cologne Water Quality Act. The RWQCBs have the regulatory authority to supervise the cleanup of hazardous waste sites referred to them by local agencies in those situations where water quality may be affected. Under the San Francisco Region Basin Plan, the San Francisco Bay Regional Water Quality Control Board is responsible for overseeing the discharge of water (from remediation activities and redevelopment activities) to surface waters. Refer to **Section 4.8.2** for additional water quality regulatory background.

Carpenter-Presley-Tanner Hazardous Substance Account Act

The Carpenter-Presley-Tanner Hazardous Substance Account Act was established under Chapter 6.8, Division 20 of the California Health and Safety Code (HSC). The Act establishes a program to provide for response authority for releases of hazardous substances, including spills and hazardous waste disposal

sites that pose a threat to public health or the environment. Furthermore, under certain circumstances, persons who experienced injuries because of exposure to a release of hazardous substances and incurred out-of-pocket medical expenses and lost wages or business income shall be compensated. Finally, the Act provides adequate funds to assure payment of the State of California's 10 percent share of the costs mandated pursuant to Section 104(c)(3) of the federal act (42 USC § 9604(c)(3)).

Hazardous Waste Control Act

The Hazardous Waste Control Act was established to protect public health and the environment and to conserve natural resources. As part of the Act, the Hazardous Waste Management Council was established to ensure that the generators of hazardous waste dispose of hazardous waste in a safe manner. Furthermore, this Council makes recommendations regarding a system of insurance and mechanisms establishing liability to achieve full compensation of all people injured or damaged by hazardous wastes this result, as required by subdivision (e) of § 25208. In lieu of the federal program pursuant to § 3006 of Public Law 94-580, as amended, the RCRA (42 USC 6926), the State of California obtains and maintains authorization to administer a state hazardous waste program. The Hazardous Waste Control Act makes available public records pertaining to hazardous waste management, information, and cleanup to the public in order to encourage public participation in permitting and other decisions in order to protect public health and the environment.

Hazardous Substance Control Laws

The California HSC § 25501 provides the following definition for "hazardous material."

1. A substance or product for which the manufacturer or producer is required to prepare a safety data sheet pursuant to the Hazardous Substances Information and Training Act (Chapter 2.5 [commencing with § 6360] of Part 1 of Division 5 of the Labor Code) or pursuant to any applicable federal law or regulation.
2. A substance listed as a radioactive material in Appendix B of Part 30 (commencing with § 30.1) of Title 10 of the Code of Federal Regulations (CFR), as maintained and updated by the Nuclear Regulatory Commission.
3. A substance listed pursuant to Title 49 of the CFR.
4. A substance listed in § 339 of Title 8 of the CCR.

A material listed as a hazardous waste, as defined by California HSC §§ 25115, 25117, and 25316.

California Accidental Release Prevention Program

The California Accidental Release Prevention (CalARP) Program is governed by regulations set forth in the California HSC (HSC §§ 25531 to 25543.3, Title 19 §§ 2735.1 to 2785.1) requiring a facility that stores, generates, treats, or manufactures a regulated hazardous material to a certain threshold (Title 19 § 2770.5, List of Substances) to develop and submit Risk Management Plans (RMP). The RMPs must document all CERCLA-regulated hazardous materials, method of storage, location of storage areas, amounts present at a facility, and safety features for containing a potential release. The purpose of the CalARP is to prevent the accidental release of hazardous materials from a stationary source. The Contra

Costa County (County) Health Services Hazardous Materials Program administers the CalARP Programs within the City of Richmond (City) and the County.

CAL FIRE and Office of the State Fire Marshal

The California Department of Forestry and Fire Protection (CAL FIRE) has developed Fire Hazard Severity Zones maps to classify Very High Fire Hazard Severity Zones within Local Responsibility Areas. Local Responsibility Areas are defined as areas outside the jurisdiction of CAL FIRE that fall within city or county fire protection. The Project Site falls within the jurisdiction of the Richmond Fire Department, as described in **Section 4.12.3**. The CAL FIRE mapping program classifies lands according to whether a very high fire hazard is present and identifies measures to mitigate the rate of spread and reduce the potential intensity of uncontrollable fires (CAL FIRE, 2007).

Amended in coordination with the Office of the State Fire Marshal, California Building Code (CBC) § 701A.3 states that all new buildings located in any fire hazard severity zone within the State Responsibility Areas, local agency Very High Fire Hazard Severity Zone, or any Wildland-Urban Interface Fire Area must comply with Chapter 7A of the CBC, which requires compliance with all applicable State and local building standards, including those for materials and construction methods for wildfire exposure, as well as State vegetation management requirements. This amendment to the CBC was incorporated to protect against damage caused by destructive wildfires within the urban interface zone.

California Occupational Safety and Health Administration

The California Occupational Safety and Health Administration (Cal/OSHA) enforces that California employees have a safe and healthy workplace to work, including investigating reported workplace hazards. Furthermore, all employers must comply with the Injury and Illness Prevention Program (IIPP) regulation. The IIPP requires employers to formulate a written injury and illness prevention program for the workplace that must include the responsible personnel for the program, a written system for compliance with safe and healthy work practices, a system of communication about safety and health matters to employees, protocols for recognizing and assessing hazards in the workplace, accident or exposure investigation procedures, processes and methods for correcting hazards, training and instruction for teaching employees about safe work practices and job hazards, and a recordkeeping system for employer compliance with the IIPP (Cal/OSHA, 2015).

Title 27 CCR Chapter 3, Subchapter 5

Title 27 of the CCR are the set of regulations from the California Department of Resources Recycling and Recovery [CalRecycle] and the SWRCB pertaining to waste disposal on land. Chapter 3, Subchapter 5 specifically addresses the regulations pertaining to the closure and post-closure of maintenance of waste sites. These regulations include general standards, closure and post-closure maintenance standards for disposal sites, landfills, composting facilities and units other than landfills.

Section 21190 (Post-closure Land Use) requires that post-closure land use will be designed and maintained in order protect public health and safety and prevent damage to infrastructure and structures. This includes preventing post-closure adverse events, such as gas explosions and public contact with

waste products (e.g., leachate). This includes specific stipulations for constructing within 1,000 feet of a closed landfill, including building designs, approvals required, monitoring, and more.

4.7.2.3. Local

California Unified Program Agency

The Hazardous Materials Programs Division of the Contra Costa County Health Services Department is the Certified Unified Program Agency (CUPA) for all of the County. The CUPA is responsible for applying regulatory standards established by the Governor's Office of Emergency Services, DTSC, Office of the State Fire Marshal, SWRCB, and Cal/EPA. The Hazardous Materials Programs Division has several programs it administers as the CUPA, including the Aboveground Petroleum Storage Act, Hazmat Business Plan, CalARP, Green Business Program, Incident Response, Unannounced Inspections, and more.

City of Richmond General Plan 2030

The Project Site and all adjacent parcels to the Project Site are covered by the City General Plan 2030 (General Plan) that was adopted on April 25, 2012. The General Plan sets goals and policies for future growth of the City. The following policies and actions relevant to this section are from the Public Safety and Noise; Economic Development; Land Use and Urban Design; Health and Wellness; Conservation, Natural Resources, and Open Space, and Housing Elements in the General Plan.

Goal H-2 ***Better Neighborhoods and Quality of Life.*** Improve the quality of life for all residents and preserve and enhance Richmond's residential neighborhoods; specifically promote high quality living environments, address substandard conditions, preserve and modernize public housing, and conserve affordable housing at risk of converting to market rates.

Policy H-2.6 ***Toxic and Contaminated Sites.*** Continue to work with the appropriate local, State, and federal agencies to promote the cleanup and reuse of contaminated sites to protect human and environmental health.

Goal SN1 ***Risk Management of Natural and Human-Caused Disasters.*** Minimize the risk of injury, loss of life, property damage and environmental degradation from seismic activity, geologic hazards, flooding and fire and the storage, use and transport of hazardous materials and operations. Promote a sustainable approach to reduce impacts of natural disasters such as flooding and fire.

Policy SN1.3 ***Hazardous Materials Operations.*** Require safe production, transportation, handling, use, and disposal of hazardous materials that may cause air, water, or soil contamination. Encourage best practices in hazardous waste management and ensure consistency with City, west Contra Costa County, and OSHA guidelines, standards, and requirements. Protect Richmond's [City's] shoreline and other natural resources from accidental occurrences by controlling the location of new hazardous waste facilities and by limiting the expansion of existing hazardous waste facilities

adjacent to the shoreline and along streams or creeks. Coordinate with federal, State, and local agencies and law enforcement to prevent the illegal transportation and disposal of hazardous waste.

Goal SN2 ***High Levels of Police and Fire Service.*** Provide a high level of security in the community to prevent and reduce crime, and minimize risks to people, property and the environment from fire.

Policy SN2.3 ***Fire Safety.*** Regularly update policies that will protect the community and its urban and natural areas from fire hazards. Emphasize prevention and awareness of fire safety guidelines to minimize risk and potential damage to life, property, and the environment. In areas designated by the Richmond Fire Department as having a high fire hazard, ensure adequate fire equipment, personnel, firebreaks, facilities, water, and access for a quick and efficient response in any area.

City of Richmond Zoning Ordinance

Article XV (Zoning): § 15.04.610.220

The City Zoning Ordinance, § 15.04.610.220, applies to Hazardous Waste Facilities, and requires that the use, handling, storage, and transportation of hazardous waste materials must fulfill the California Hazardous Materials Regulations provisions and any other applicable laws. Furthermore, discharge of any materials that could cause dangerous emissions or offensive elements is prohibited into any public or private sewage disposal system, stream, or the ground. Exceptions are allowed if they are in accordance with regulations, licenses, or approvals from appropriate local and State agencies that have jurisdiction in such matters (City of Richmond, 2016b).

Article VIII (Fire): § 8.16.080

Article VIII Fire, § 8.16.080 of the Fire Ordinance in the Richmond Municipal Code (RMC) designates regulations applicable to any area of the City which is designated as a Very High Fire Hazard Severity Zones in order to minimize danger to the public health and safety caused by building in an area with a high risk of grass and brush fire. These regulations include a variety measures to keep fire fuel levels and building susceptibility to fire risk low (City of Richmond, 2019g).

- Regulations. Within the Very High Fire Hazard Severity Zones established by this Section, all new roads, new buildings, other new structural improvements, and existing structures shall be subject to the following regulations.
 - All buildings shall be designed and [sited] so that the roof and other areas may be kept free of leaves, needles, and other dead vegetative growth.
 - All new buildings shall have a Class B roofing tested in accordance with American Society for Testing and Materials International (ASTM) E108 or Underwriter's Laboratory 790. In addition, fire-retardant-treated wood roof coverings shall be tested in accordance with ASTM D2898, as adopted in the CBC. Every existing building, when 50 percent or more of the total roof area is re-roofed within any one-year period, shall have a fire retardant roof

- covering that is at least Class B as defined in the CBC. The installer of the roof covering shall provide certification of the roof covering classification to the building owner and, when requested, to the City Building Official.
- Wood shingles or wood shakes shall not be used for exterior wall covering.
 - All buildings shall have the underside of balconies, unenclosed roofs and floors, and other similar horizontal surfaces protected by at least one-hour fire-resistive construction as required by the Fire Chief. Combustible eaves shall be protected as approved by the Fire Chief.
 - Unprotected vertical or horizontal wood supports for stilt type or cantilevered buildings shall be of not less than 5.5 inches in the least dimension.
 - All openings into the interior of a building for ventilation purposes shall be protected by non-corrosive metallic screening having a mesh no larger than one-quarter inch.
 - Access openings to under-floor areas shall be protected by either non-corrosive metallic screening having a mesh no larger than one-quarter inch or by a three-quarter inch solid wood door or equivalent.
 - When difficulty of access or topography occurs, or structures do not meet fire flow requirements, or the fire department response time is six minutes or more, the Fire Chief may require other fire mitigation measures as for all occupancies.
- Vegetation management standards in Very High Fire Hazard Severity Zones. Any person who owns, leases, controls, operates, or maintains any property in a Very High Fire Hazard Severity Zone shall maintain such property in conformance with the vegetation maintenance standards established by the City Council by Resolution 192-95, or said resolution's successor. Copies of Resolution 192-95 and any successor resolution shall be maintained by and be available in the City Clerk's Office.
 - Violations and penalties. Any violation of this section shall constitute an infraction punishable by the policies, enforcement procedures and fines established by RMC Chapter 2.62 Administrative Citations.
 - Public nuisance. Any violation of this section shall constitute a public nuisance which may be abated, and abatement costs shall be recovered in the manner provided in RMC §§ 9.22.100, 9.22.110, and 9.22.120.
 - Firebreaks. In lieu of ordering the abatement of fire hazards as provided in in this section, the Fire Chief may order the preparation of firebreaks around parcels of property when combustible weeds, crops, or brush are present. In determining the proper width for firebreaks, the Fire Chief or designee shall consider the height of the growth, weather conditions, topography, and the accessibility to the property of fire protection equipment. The procedure set forth in subsection (d) above shall also apply to the preparation of firebreaks.
 - Alternate Procedures. The procedures provided for by this section are an alternative to any other procedure adopted by the City Council for the abatement of public nuisances, or any procedure which may be authorized by the laws of State.

City Council Resolution 192-95

City Council Resolution 192-95 is the fire hazard reduction vegetation management standards (included as **Appendix S**). The vegetation management standards address local community fire protection planning in order to reduce the level of fire hazards in the City's wildland intermixed areas. There are three specific goals for the vegetation management planning where fire poses the greatest risk to life and property: keep all fires small, limit the speed that any fire will grow, and make it difficult for fires to ignite and spread. Sections included in the fire hazard reduction vegetation management standards include hazard zones, ornamental landscaping, vegetation management standards, and structural fire standards. These fire safe vegetation management standards are applicable to both vacant and developed lots for the entire City. For properties within the Very High Fire Hazard Severity zones, there are special vegetation management standards, including, but not limited to, the following.

- Fire breaks must be created and maintained in areas within 30 feet of any occupied dwelling.
- Fuel breaks must be created and maintained in areas extending from 30 to 100 feet surrounding any structure.
- Fuel breaks must be created and maintained on vacant lots 30 feet wide along the property line and 100 feet from neighboring structures.

4.7.3 ENVIRONMENTAL SETTING

Information provided in this section is derived from a number of sources, including the Phase I Environmental Site Assessment (Phase I; **Appendix G**). This analysis focuses on the manner in which development could alter the Project Site under baseline conditions, which are defined for the purposes of the analysis in this section as physical conditions on or around the publication of the Notice of Preparation (NOP) in July 2019.

4.7.3.1. Hazardous Materials

Site History

Upon closure of the Point Molate Naval Fuel Depot (NFD) in 1995, a series of environmental reviews were performed under the BRAC and DBRAC processes to assess environmental conditions. The base closure activities required the U.S. Navy (Navy) to conduct a base-wide Environmental Baseline Survey (EBS) in 1996 under the Navy IRP. The base-wide EBS grouped the Project Site into parcels identified as EBS parcels 1 through 37 as shown in **Figure 4.7-1**. A Supplemental EBS, prepared in 2003, updated the 1996 base-wide EBS parcels by grouping the 37 EBS parcels with similar environmental issues into 13 property disposal areas (identified as Disposal Areas 1 through 13; **Figure 3-9**). In September 2003, approximately 372 acres of the Project Site were transferred to the City under a Finding of Suitability to Transfer (Appendix X of 2011 FEIR). The remaining 40 acres of the 412-acre federal facility were transferred to the City on March 29, 2010, on the basis of a Finding of Suitability for Early Transfer (FOSET; Appendix X of 2011 FEIR). The FOSET included Disposal Areas 3, 5, 10, and 13. These Disposal Areas correspond to the IRP investigation areas: Installation Restoration (IR) Site 1 (Disposal Area 10), IR Site 2 (Disposal Area 5, partial), IR Site 3 (Disposal Area 3), and IR Site 4 (Disposal Areas 5 and 13). The purpose of the FOSET was to document the Navy's finding that the remaining Navy-owned



property was suitable for early transfer to the City pursuant to the provisions of CERCLA § 120 (h)(3)(C). The FOSET specified that ongoing or planned remedial or corrective actions that the Navy is responsible for would be carried out under an Early Transfer Cooperative Agreement (ETCA) for the NFD between the Navy and the City.

The City entered into the ETCA with the Navy for the environmental remediation of the NFD to satisfy the requirements of the then draft site cleanup requirements developed by the RWQCB.

Subsequently, the site cleanup requirements were formally adopted by the RWQCB on December 19, 2011, in Order No. R2-2011-0087 (Appendix A in **Appendix G**), which is still active. The RWQCB utilized the 2011 FEIR as the CEQA compliance document for this adoption. In addition, a Covenant to Restrict Use of Property (CRUP) was recorded over the Project Site in 2010. The CRUP provides for various restrictions on the use of the property and prohibitions on certain types of development as well as other restrictions. Furthermore, the CRUP protects the public during the completion of site remediation activities and provides for the necessary access to complete those activities. For more details on the restricted uses and actions imposed by the CRUP, refer to Appendix C in **Appendix G**.

A Soil and Groundwater Management Plan (SGWMP) was prepared for activities that may disturb soil or produce groundwater at the Project Site. The RWQCB approved the SGWMP on August 21, 2012 (**Appendix G**). The SGWMP allows for and describes protocols that must be followed when undertaking soil disturbance and building demolition activities at the Project Site. Examples of activities covered by the SGWMP include, but are not limited to, landscaping, installing and maintaining utilities, grading, trenching, installing deep foundations, drilling borings for subsurface exploration or monitoring well installation, building demolition, and constructing subsurface structures. The SGWMP covers all portions of the Point Molate Site except for IR Site 3 and IR Site 4 which are currently undergoing site-specific remediation activities. From 2014 through 2015, the City implemented extensive remedial activities at IR Site 3 (see **Section 4.7.3.2** for description of activities) as required by the RWQCB per Order R2-2011-0087. As part of the remediation activities the RWQCB has required that the SGWMP be amended to include the IR Site 3. However, as of the writing of this Draft Supplemental Environmental Impact Report (SEIR), these amendments to the SGWMP have not been completed (**Appendix G**).

Current Environmental Conditions

Terraphase Engineering Inc. (Terraphase) conducted a Phase I Environmental Site Assessment (Phase I) in August 2019, which identified potential areas of concern (**Appendix G**). Terraphase conducted the Phase I in accordance with the requirements of the ASTM Designation E1527-13. The Phase I summarizes documented releases, storage, generation, and use of hazardous materials on or adjacent to the Project Site. The Phase I reviewed existing documentation from government databases that contain information relating to releases, storage, generation, and use of hazardous materials on or adjacent to the Project Site, including the following databases:

- EnviroStor – DTSC's data management system for tracking cleanup, permitting, enforcement and investigation efforts at hazardous waste facilities and sites with known contamination or sites where there may be reasons to investigate further.

- Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) – EPA database containing information on hazardous waste sites, potentially hazardous waste sites, and associated remedial activities across the nation. It was retired in November 2013 and replaced by SEMS.
- The Hazardous Waste Tracking System (HAZNET) – DTSC’s data repository for hazardous waste Identification (ID) numbers and manifest information.
- Formerly Used Defense Sites (FUDS) – database maintained by US ACE.

The ESA reviews these databases to determine whether, in Terraphase’s judgment, Recognized Environmental Conditions (REC) exist for the site. As defined by the ASTM, a REC is the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or the material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. The term REC includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include *de minimis* conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies (**Appendix G**).

Furthermore, in accordance with ASTM E1527-13, the Phase I also identifies controlled RECs (CREC) and historical RECs (HREC) at the Project Site. CRECs are defined by ASTM as an environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (such as land use restrictions or engineering controls). HRECs are defined by ASTM as a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority or has met the unrestricted use criteria established by regulatory authority without subjecting the property to any required controls (such as land use restrictions). It is important to note that ASTM identifies that, before calling a past release an HREC, the environmental professional should determine if the past release is a REC at the time the Phase I is completed (**Appendix G**).

On-Site Environmental Conditions

The majority of the hazardous materials issues identified and analyzed for the Project Site in the Phase I are associated with the NFD. The hazardous material listings associated with the Project Site or subareas of the Project Site include the following that were identified through environmental database searches (an explanation of each database can be found in Appendix I of **Appendix G**).

- California Environmental Reporting System (CERS) indicates IR Site 1 and IR Site 3 as solid waste disposal sites with several USTs at the Project Site.
- Solid Waste Information System (SWIS SWF/LF) indicates the presence of an active, closed, or inactive solid waste disposal facility or landfill at IR Site 1 and IR Site 3.
- RCRA Large Quantity Generators (RCRA-LQG) and RCRA Small Quantity Generator (RCRA-SQG) identify the NFD as a generator of hazardous wastes.

- State Response Sites (RESPONSE) and ENVIROSTOR identify the NFD as a confirmed release site by the DTSC; the status is listed as “Refer to RWQCB” indicating regulatory oversight is under the RWQCB and not DTSC.
- Federal Facility Site Information Listing (CERCLIS) identifies the Naval Supply Center (i.e., NFD) as a hazardous waste site.
- USTs (SWEEPS UST, FID UST, HIST UST) lists the Site for containing leaking USTs (LUST).
- RWQCB enforcement action (ENF) and Cleanup Program Site (CPS) formerly known as the Spills, Leaks, Investigations, and Cleanup (SLIC) sites for the Packaged Groundwater Treatment Plant (PGWTP) system that was decommissioned in 2014-2015 as part of the IR Site 3 remediation (see below discussion of IR Site 3).
- Listed on the Hazardous Waste Manifest Listings (HAZNET) for hazardous waste manifests generated during remediation activities at IR Site 3.
- Listed on the FUDS indicating the Project Site’s former use by the Navy.
- Listed on the National Pollutant Discharge Elimination System (NPDES) for the PGWTP system.
- Listed on Military Privatized Sites indicating former military use of the site by the Navy.
- Listed on the California Integrated Water Quality System (CIWQS) for the packaged groundwater treatment system and IR Site 3.

The following is a discussion concerning potential RECs identified in the environmental database searches listed above and analyzed in the Phase I. The RECs are either grouped in relation to the EBS Parcels and Disposal Areas as identified in the EBS and Supplemental ESB studies prepared for the NFD, or by source/generator. The delineation of the EBS Parcels and Disposal Areas are shown in **Figure 4.7-1** and **Figure 3-9**, respectively. The discussion below describes the location and a brief history of each parcel along with a summary of remediation performed to date. For the full discussion of these RECs, refer to **Appendix G**. Detailed historical information prior to 2011 can also be found in the 2011 FEIR, Section 3.12.2, and **Appendix G**.

IR Site 1: Waste Disposal Area

IR Site 1 is the Waste Disposal Area, a closed landfill that was used by the Navy that is approximately 1,000 feet long, up to 50 feet deep, and 50 to 200 feet wide. IR Site 1 is located on a southwesterly facing slope within a steep ravine near the center of the Project Site as shown in **Figure 3-10**, and the former landfill is located in EBS Parcel 7 (**Figure 4.7-1**) and designated as Disposal Area 10. Contaminants of concern include total petroleum hydrocarbons (TPH) and polycyclic/polynuclear aromatic hydrocarbons (PAH). The City is currently responsible for maintaining the cover placed on the landfill. A water treatment system operates at IR Site 1 to remove low levels of TPH contained in seepage collected from the landfill toe. Treatment activities are regularly reviewed for effectiveness and appropriateness of operations. These activities are conducted in response to Task 11 of RWQCB Order R2-2011-0087. Annual reports are currently submitted to the RWQCB and Contra Costa County Environmental Health Services Department (CCCEHSD) summarizing the monthly, quarterly, and annual operation, maintenance, and monitoring activities at IR Site 1 (**Appendix G**).

IR Site 1 was identified by the Phase I as a CREC for the following reasons: a remedial action was completed and an ROD prepared for the site, contamination has been left in place with land use

restrictions, and there are ongoing monitoring and maintenance activities that will be required for the landfill in perpetuity.

IR Site 2: Sandblast Grit Disposal Areas

Sandblasting was conducted at the NFD to prepare metal surfaces for painting, and IR Site 2 is composed of five localized areas dispersed across the site that are suspected of historical sandblasting activities or sandblast grit disposal: Areas 2A, 2B, 2C, 2D, and 2E. An ROD documenting that no further action (NFA) was necessary at IR Site 2 was signed by the Navy on August 31, 2000, and by the RWQCB on September 5, 2000. However, as part of the Phase I, the historical sampling results from the 1998 *Sandblast Grid (Site 2) Areas Removal Action Final Project Completion Report* were compared to current, updated Environmental Screening Levels (ESL). The results indicated that samples collected in each of the areas of IR Site 2 exceeded the current Tier 1 ESLs for various compounds (cadmium, lead [Pb], nickel, and zinc). However, the Tier 1 ESL for cadmium, Pb, nickel, and zinc is based on terrestrial habitat exposure and associated concerns for ecological receptors. These ecological receptors are not present in these areas as they are highly disturbed by previous development activities. Samples results were also compared to the ESL for the residential exposure and construction worker scenario and samples collected from Areas 2A and 2B exceeded the residential ESL for Pb and the construction worker ESL for Pb and nickel.

As discussed above, an ROD has been prepared and approved for the site, but the results of confirmation samples collected from the sandblast grit areas in IR Site 2 Area 2A and Area 2B exceed current regulatory screening levels for residential site re-use. Therefore, the Phase I determined that IR Site 2 Areas 2A and 2B are identified as a REC while IR Site 2 Areas 2C, 2D, and 2E are identified as HRECs.

IR Site 3: Treatment Pond Area

IR Site 3 is a treatment pond area that was located near the center of the NFD on a flat, filled area adjacent to the San Francisco Bay (Bay). Previous operations at IR Site 3 included a sump pond that held fuel and other liquid wastes, three former aboveground storage tanks (AST), an industrial waste disposal area, fuel transfer and reclamation operations, and three wastewater treatment ponds constructed on the filled sum pond in the 1970s. In 1995, the Navy installed a subsurface extraction trench along the shoreline to capture oil-contaminated groundwater as an emergency and interim remedy. The system included a PGWTP, which treated groundwater extracted from the extraction trench before it was discharged (under a NPDES permit) to the Bay. Additional remedial activities were conducted in 2014 and 2015, including the following.

- Excavation and off-site disposal of Class II petroleum-impacted soil and Class I (California-regulated non-RCRA) hazardous wastes
- Demolition of existing above- and belowground facilities, including the extraction trench and the PGWTP
- Installation of a contingency groundwater extraction trench consisting of clean gravel wrapped with a non-woven geotextile to a depth of 2 feet into the underlying Younger Bay Mud and seven groundwater extraction/monitoring wells
- Backfilling of the excavated areas with clean material

Approximately 100,000 cubic yards of contaminated soils were removed and disposed of offsite. The excavation extended in parts of IR Site 3 to depths up to 20 feet belowground surface (bgs) and after this, the area was revegetated with native grasses (**Appendix G**).

The RWQCB issued a letter generally concurring with the Remedial Action Completion Report regarding the soil remediation activities described above, although official regulatory approval has not been granted as of the date of this report. The RWQCB has also issued letters stating that additional work is required to evaluate the potential risk to ecological receptors in the Bay from hydrocarbon oxidation products (HOP) that remain in groundwater at IR Site 3 (**Appendix G**).

Because the RWQCB has not granted official regulatory approval and wants to evaluate the potential risk to ecological receptors in the Bay from HOPs that remain in groundwater at IR Site 3, additional activities (revision of the land use controls and SGWMP and continued groundwater monitoring) are still required to protect human health and the environment. Therefore, IR Site 3 is identified as a REC for the Project Site.

IR Site 4: Drum Lot 1, Drum Lot 2, and Building 87

IR Site 4 includes Drum Lot 1, Drum Lot 2, and Building 87. Drum Lot 1 is located on the central shoreline of the NFD, and the lot was used to store fuel drums filled onsite for transport offsite. An inactive, aboveground, primary fuel pumping station and a drum filling plant (Building 89) are also present within Drum Lot 1. Drum Lot 2 is a paved area located in the southern half of the NFD, east of Main Road (also known as Stenmark Drive). Drum Lot 2 was used to store fuel drums filled onsite for transport off site. At one time, the lot was used to store and maintain rail cars that were used by the Pacific Locomotive Association for recreational purposes (**Appendix G**). Sandblasting was conducted in the northwest corner of Drum Lot 2 and is included as part of IR Site 2 Area E discussion above. Building 87 is located in EBS Parcel 30 immediately to the west of Drum Lot 2. Historically, this building was used as an industrial supply warehouse and equipment repair, locomotive maintenance, and training facility. The building was also used by the Navy Disease Vector and Ecology Control Center (DVECC) at a later date; DVECC use reportedly consisted of pesticide storage and classroom staff training. An area at the southwestern corner of Building 87 was identified as having been used to rinse pesticide equipment (**Appendix G**).

Groundwater and soil-gas investigations were conducted in Drum Lot 2 in 2012. Terraphase conducted a phased investigation of soil, soil vapor, and groundwater in 2012, and the results of the investigations are summarized as follows.

- A soil source of volatile organic compound (VOC) contamination in the vadose zone was not identified, and it appears unlikely that the soil is contributing to groundwater contamination by leaching.
- Soil-gas VOC concentrations were relatively low and not indicative of the presence of a continuing soil source.
- The lateral and vertical distribution of VOCs in soil, soil vapor, and groundwater at IR Site 4 was adequately characterized.

Terraphase modified the extent of the originally proposed groundwater remediation based on the investigation results. The Interim Remedial Measure (IRM) design was modified so that the treatment

area would include the full extent of groundwater with trichloroethene (TCE) concentrations exceeding the cleanup goal. The IRM consisted of the injection of emulsified oil substrate to promote enhanced reductive dechlorination of TCE for Drum Lot 2 and was in use from November 2012 through January 2013. After eight quarters of performance monitoring following injections, reductions in TCE concentrations detected in groundwater ranged from 67 percent (well MW10-11) to 99.9 percent (well MW31-07) and the average decrease in TCE concentrations was 95.1 percent, relative to baseline conditions (**Appendix G**).

In response to RWQCB Order R2-2001-0087, a human health risk assessment (HHRA) work plan was prepared for Drum Lot 2 to identify and evaluate the available data for Drum Lot 2 and the Building 87 areas, and to identify data gaps that would need to be addressed prior to completing an HHRA evaluating a future unrestricted residential land use scenario. RWQCB approval of the HHRA work plan was still pending at the time of this Draft SEIR (**Appendix G**).

Due to the above circumstances, the Phase I EDR (Appendix I of **Appendix G**) identified IR Site 4 as a REC because additional activities are still required to protect human health and the environment.

Storage Tanks

A number of USTs and ASTs are located throughout the Project Site. The history and status of these tanks is summarized in Table 2 of **Appendix G** and is briefly discussed below.

Large Underground Storage Tanks

The NFD fuel system was composed of USTs and 38 valve boxes that were connected by a network of approximately 9 miles of underground and aboveground pipeline. More specifically, the NFD fuel system included the following.

- 20 large hillside fuel USTs (identified as Tanks 1 through 20), each with a capacity of 2.1 million gallons
- Four additional hillside fuel USTs (identified as Tanks 21 through 24) with a capacity of approximately 1.0 million gallons each (located on land leased by the Navy from Chevron® northwest of the Project Site)
- Two smaller tanks with capacities of 580,000 gallons (Tank B) and 100,800 gallons (Tank C)

Figure 3-10 shows the locations of the large USTs at the Project Site. Because Tanks 21 through 24 are not located on the Project Site and have been removed from the adjacent property, they are not discussed further in this SEIR. The USTs stored various chemical compounds during operations at the NFD, including bunker fuel, marine diesel fuel, jet propellant-5, diesel fuel, wastewater, sediment, and stored naval ballast (**Appendix G**).

Several USTs have received regulatory closing to date. In accordance with the requirements of the RWQCB Order, a UST Management Plan was prepared for the Project Site in 2013 to outline the plan and schedule for obtaining NFA for the remaining environmentally open, but structurally closed tanks (**Appendix G**). However, evaluations for closure under the UST Management Plan were not identified. Regardless of the closure status of the USTs with the RWQCB, all of the structurally closed-in-place

USTs require ongoing maintenance and monitoring to reduce the likelihood that they could become a physical hazard. The large USTs that have not received regulatory environmental closure (Tanks B, C, 2, 3, 5, 6, 8, 13, 15, 18, and 19) require further investigation and remediation. The UST Management Plan summarized the extent of contamination remaining at the environmentally open USTs. In general, UST soil borings indicated limited petroleum hydrocarbon contamination (no obvious product or residual petroleum hydrocarbon staining) in backfill material surrounding the USTs between the surface and 15 feet bgs. In 2010, the Navy submitted requests for closure for Tanks B, C, 2, 6, 8, 13, 15, 18, and 19; however, RWQCB concurrence has not been granted for these closure requests as of the writing of this Draft SEIR. In 2016, the City submitted a request for closure of Tank 2. The RWQCB issued comments that have not been resolved as of the writing of this Draft SEIR (**Appendix G**).

Due to the information described above, Tanks 1, 4, 7, 9, 10, 11, 12, 14, 16, 17, and 20 and the fuel pipelines and valve boxes were identified as CRECs in the Phase I. The large USTs that have not yet received regulatory environmental closure (Tanks B, C, 2, 3, 5, 6, 8, 13, 15, 18, and 19) are identified as RECs by the Phase I.

Small Underground Storage Tanks

In addition to the large USTs that were part of the Navy fuel system, additional smaller USTs have been used at the Project Site for a variety of purposes as summarized in Table 2 of **Appendix G** and discussed below.

- MG1 was an 8,000-gallon gasoline UST removed from the Project Site in 1999 under the oversight of the CCCEHSD. The UST was located within EBS Parcel 21.
- A 13,000-gallon UST located beneath Building 6 was used for heating oil. The UST was closed in place.
- DVECC UST was a 1,000-gallon fiberglass tank adjacent to Building 87 used to store wastewater generated from the cleaning of pesticide application equipment removed from the Site in 1990. The DVECC UST is associated with Building 87 and is considered part of IR Site 4.
- UST 110 was a 5,000-gallon tank that previously stored motor gas fuel, contaminated fuels, and F76 marine diesel located within the boundaries of IR Site 3. The tank was removed in 1990 under the oversight of CCCEHSD. Soil samples collected from the tank grave had detected TPH concentrations; however, the Navy concluded that the source of the contamination may have been from past disposal practices.
- A 750-gallon UST located on the west side of Building 68 was used to hold diesel fuel used for a generator and pump associated with an adjacent pump house. The UST was removed some time in the 1990s under a permit from the City of Richmond Fire Department and CCCEHSD.
- A 750-gallon UST located on the southern side of Building 69 was used to hold diesel fuel used for a generator and pump associated with an adjacent pump house. The UST was removed some time in the 1990s under a permit from the City of Richmond Fire Department and CCCEHSD.
- Fifteen 550-gallon heating oil tanks served the housing units located at the Project Site. Use of the heating oil tanks ceased in 1995 when the last residents left the Project Site; the USTs were later closed in place.

The DVECC UST and UST 110 are considered under the IR Site 4 and IR Site 3 discussions, respectively. MG1, the Building 6 UST, the Building 68 UST, the Building 69 UST, and the 15 closed-in-place heating oil USTs are considered RECs by the Phase I because evidence of soil sampling and regulatory closure for these tanks was not identified during the Phase I.

Aboveground Storage Tanks

A total of 33 ASTs were identified at the Project Site during previous assessments. The ASTs have reportedly been used for a variety of materials, including storage of diesel fuel, heating oil, propane, ice inhibitor, and water, as summarized in Table 2 of **Appendix G**. Of the 33 ASTs, 14 have been removed from the Project Site. According to the FOSET, no environmental conditions were associated with the ASTs. Furthermore, evidence of staining or release has not been documented for the ASTs, including during a site visit for the Phase I. Given the lack of evidence of releases, the ASTs are identified as a *de minimis* condition by the Phase I.

Electrical Transformers

Eighty-six transformers have been identified at the Project Site and the majority of the transformers are/were pole-mounted. Information regarding transformers at the Project Site is summarized in Table 4 of **Appendix G**. Figure 4-5 in Appendix N of **Appendix G** shows the transformer locations. Of the 77 transformers tested for PCBs, 70 did not have PCBs detected in the oil greater than the laboratory reporting limit of 1 part per million (ppm), 10 contained oil with PCBs detected between 1 ppm and 50 ppm, and seven were identified as PCB-contaminated transformers, meaning that PCB was detected in the oil at a concentration greater than 50 ppm but less than 500 ppm. Leaks of transformer oil with greater than 1 ppm of PCBs from the transformers may have impacted shallow soil. Therefore, the transformers where PCBs were detected in oil greater than 1 ppm are identified as RECs by the Phase I.

Former Small Arms Firing Range

A small arms firing range was located within EBS Parcel 14. In the past, elevated concentrations of Pb have been identified in the soil. Although there is a land-use restriction for the former small arms firing range, an NFA determination for the former small arms firing range was made based on an unrestricted use assuming risk thresholds that are no longer used by the local regulatory agencies. In 2007, the Cal/EPA Office of Environmental Health Hazard Assessment determined that environmental exposure leading to a rise in blood lead of greater than 1 microgram per deciliter (µg/dL) is the appropriate threshold criterion, which is lower than the EPA limit of 10 µg/dL. Therefore, the former small arms firing range is identified as a REC by the Phase I.

Building 18

Building 18 is located in EBS Parcel 21. The building is a single-story corrugated steel structure on a concrete foundation. The Navy used this building to store transportation-related equipment, chemicals, and fuel. Given the limited extent of detections of contaminants of concern (COC), Building 18 is identified as a *de minimis* condition by the Phase I.

Asbestos-Containing Material

The Project Site contains older buildings with confirmed and potential presence of asbestos-containing materials (ACM) within them and the potential for buried ACM to be present in the subsurface. This is noted as an environmental concern by the Phase I, however asbestos that is within a building interior as a building material is excluded from CERCLA and is, therefore, not considered a REC (refer to **Section 4.2.2** and **Section 4.7.2** for additional information on asbestos regulations, including information on National Emissions Standards for Hazardous Air Pollutants [NESHAP]).

Lead-Based Paint

The Navy formerly conducted lead-based paint inspections on a number of former family housing units at the Project Site. The Navy found lead-based paint throughout the interior and exterior of the former housing units surveyed. Although lead-based paint is considered a building material and is excluded from CERCLA, if the lead-based paint is known or suspected to have impacted soil, then the presence of lead-based paint can be considered a REC in soils surrounding the affected structures. Significant damage (i.e., peeling and cracking paint) was noted to lead-based paint surfaces in the Supplemental Environmental Baseline Survey. Given the confirmed presence of lead-based paint in some buildings and the likely presence in other buildings based on the age of the buildings, the potential for Pb in soil from the lead-based paint on the structures at the Project Site is identified as a REC by the Phase I.

Railroad Tracks

A portion of the Richmond Beltline Railroad passes through the Project Site. Following NFD occupation of the Project Site in 1941, additional spurs were added from the main line in Drum Lot 1 and Drum Lot 2 to facilitate the transfer of fuel from the Bay to the on-site USTs. Historically, these two additional spurs were used to transport fuel from the pier. Arsenic concentrations above background levels have been detected in shallow soil near the tracks (NCE, 2016). In addition, Pb was detected at concentrations exceeding residential screening criteria (NCE, 2016). Because of the arsenic and Pb levels detected in the soil near the Richmond Beltline Railroad, the railroad tracks are identified as a REC by the Phase I.

Groundwater Monitoring

Site-wide groundwater monitoring is conducted per the RWQCB approved SGWMP and its approved amendments. The current groundwater monitoring well network is based on an evaluation of the monitoring conducted to date and historical data trends as groundwater quality trends have been documented over approximately a decade of groundwater monitoring in most parts of the site. The groundwater monitoring well network includes wells that were selected to monitor groundwater conditions along the perimeter of the Project Site along the Bay, and additional groundwater monitoring wells in other selected areas of the Project Site. The current monitoring well network includes six categories of wells (Figure 6 of **Appendix G**), as follows.

1. Perimeter Wells: wells located within 150 feet of the Bay shoreline, including the northern and southern shoreline areas
2. IR Site 3 Contingency Trench Wells: wells installed in the contingency trench in the IR Site 3 remediation area

3. IR Site 3 Contingency Trench Upgradient Wells: wells installed in the area upgradient of the contingency trench in the IR Site 3 remediation area
4. UST Wells: wells near “open” USTs, i.e., tanks for which regulatory closure has not yet been obtained
5. Drainage Area Wells: wells located at the base of major drainages that contain an open tank site or other sites
6. Drum Lot 2 Wells: wells located in the northern portion of former Drum Lot 2, where VOCs are present in groundwater

Historical releases of petroleum and VOCs have resulted in impacts to groundwater at concentrations exceeding regulatory standards. Based on information contained in correspondence with the RWQCB during the Phase I, the presence of HOPs in perimeter groundwater has been identified as a potential threat to Bay ecological receptors. The evaluation of HOPs in groundwater is part of the REC identified at IR Site 3.

Off-Site Environmental Conditions

The results of the Phase I records search include the off-site hazardous materials events, including hazardous waste generators, hazardous waste releases, regulated air emissions, ASTs, LUSTs, large quantity generators of hazardous materials, and registered USTs on or within a 0.5-mile radius of the Project Site. A summary of the key hazardous materials events located outside of the Project Site and not associated with the NFD is provided in **Table 4.7-1**.

Of the sites listed outside of the Project Site, the TLHUS Inc./Pacific Molasses Company/Port of Richmond Terminal 4/ PakTank Richmond, Caltrans Richmond Toll Plaza, and Chevron®-Richmond Refinery listings identified releases of hazardous materials to the environment. However, these sites are either listed as closed cases or open with monitoring or remediation, and no COC is provided for these listings. Because no COC is listed for these sites and because of their distance from the Project Site, the sites in **Table 4.7-1** would not pose a significant risk to the on-site development and on-site development would not exacerbate any risk posed by these sites. Furthermore, none of these sites are adjacent to or near the off-site infrastructure improvement areas. Therefore, these sites would not pose a significant risk to the Modified Project with the exception of the Chevron®-Richmond Refinery. For more information about the databases that were utilized, refer to Appendix I of **Appendix G**.

Chevron®-Richmond Refinery

Chevron® owns and operates a petroleum refinery facility that is located immediately east of the Project Site, east of the Potrero Ridge. The Chevron®-Richmond facility is the largest refinery in the San Francisco Bay Area (Bay Area) with a capacity of 240,000 barrels of crude oil per day (**Appendix G**). The primary business of the facility is to produce fuels for vehicle transportation. The facility also produces lubricating oils and liquefied petroleum gas. NH₃ is a by-product of the petroleum refining process; on-site storage areas capture and store the NH₃ gas. Human exposure to NH₃ reacts with moisture in mucosal surfaces (eyes, skin, and respiratory tract) to produce ammonium hydroxide, which may cause injury. The severity of the injury depends upon the concentration and duration of exposure. NH₃ is lighter than air and will rise, which causes the gas to dissipate rapidly into the atmosphere. Ecological exposure to NH₃ could

cause harmful impacts to aquatic life, plants, and livestock. The severity of the impacts depends upon the concentration and duration of exposure.

The 2011 FEIR examined the Chevron®-Richmond Refinery in detail. More information regarding on-site active mitigation measures for the Casino Project, the consequence modeling analysis performed of the potential risk of NH₃ exposure, and the emergency response program can be found in Section 3.12.2 of the 2011 FEIR. However, since the publication of the 2011 FEIR, the Chevron®-Richmond Refinery is undergoing a refinery modernization project to update the facilities at the plant (Chevron, 2019). An Environmental Impact Report (EIR), the Chevron Refinery Modernization Project EIR, was prepared for the project (City of Richmond, 2014). The City was the Lead Agency and approved the project on July 29, 2014. The Chevron® Refinery Modernization Project includes the replacement of a hydrogen plant, new equipment for improved sulfur removal for the naturally occurring sulfur in the feedstocks, infrastructure improvements (pipes, utility lines, etc.), new equipment to reduce air emissions, and design features to reduce potential impacts to the environment. For hazardous materials, the possible impacts examined in the Chevron Refinery Modernization Project EIR included effects related to the use of anhydrous ammonia and hydrogen sulfide (H₂S). While other hazardous materials were found to not have a new impact compared to existing conditions, both of these chemical compounds were determined to have a potentially significant impact off-site. The Refinery Modernization Project EIR concluded that H₂S levels were anticipated to decrease due to the new hydrogen plant while NH₃ was expected to increase. The net increase estimated for NH₃ after the closure of the old hydrogen and operation of the new hydrogen plant was approximately 2,000 pounds, which is approximately 0.08 percent increase from the pre-project baseline of the facility. Under the worst-case accidental release scenarios for the new NH₃ pipeline, it was estimated that this would reach a level of concern, 150 ppm in this scenario, at a radius of 0.9 miles. In other words, the release of NH₃ from the new pipeline would have to travel 0.9 miles to be a level of concern for public health. At the time of the publication of the Chevron Refinery Modernization Project EIR, no residential neighbors were within this 0.9-mile radius. Furthermore, the quantity of NH₃ released would be less than assessed for the current pipeline in the 2013 Risk Management Plan, and the probability of NH₃ release is less for the new pipeline compared to the existing pipeline.

4.7.3.2. Hazards

City of Richmond Hazardous Materials Contingency Plan

The City has formulated a Hazardous Materials Contingency Plan to govern the cooperative operations of all agencies involved in a hazardous materials incident. This is a blueprint for hazardous materials emergencies. Within the framework of the plan, the City of Richmond Fire Department has established a set of standard operating procedures that are to be used by fire personnel during these emergencies. These procedures are based on the concept that fire personnel will perform at the level, greater than the standard of 1991 editions of National Fire Protection Association 472 and 29 CFR 1910.120. In order to differentiate the various responsibilities, training levels have been established commensurate with the following required duties.

- Hazardous materials response team/decontamination members assigned to Station 64 shall be trained to the level of Hazardous and Materials Technician
- Company members shall be trained to the level of First Responder

TABLE 4.7-1
OFF-SITE ENVIRONMENTAL DATABASE LISTINGS NOT RELATED TO THE NAVAL FUEL DEPOT

Site Identification	Distance to the Site	Contaminant of Concern	Media Affected	Case Status	Databases
TLHUS Inc./Pacific Molasses Company/Port of Richmond Terminal 4/ PakTank Richmond Inc.*	~4,000 feet northwest	Diesel, Benzene, Gasoline, Waste Oil/Motor/Hydraulic/Lubricating	Soil	Open – Verification Monitoring	HAZNET, FINDS, RGA LUST, LUST, CPS-SLIC, HIST CORTESE, NPDES, RCRA-SQG, SWEEPS UST, HIST UST, CA FID UST
Dutra Materials	~1,000 feet southeast	Not specified	Not specified	Not specified	US MINES
Starlight Marine	~152 feet southeast	Not specified	Not specified	Not specified	EDR Hist Auto
Pacific Bell	~3,800 feet southeast	Not specified	Not specified	Not specified	RCRA-SQG
Caltrans Richmond Toll Plaza	~3,800 feet southeast	Pb	Soil	No Further Action	VCA
Point San Pablo Yacht Harbor	~2,500 feet north	Not specified	Not specified	Case Closed	LUST
Chevron®-Richmond Refinery	~4,000 feet southeast	Benzene, Chlordane, Other Insecticides/Pesticide /Fumigants/Herbicides, Arsenic, Chromium, Pb, Mercury, (elemental), Nickel, Other Metal, Diesel, Methyl-Tert-Butyl-Ether/TBA/Other Oxygenates, Gasoline, Polynuclear/polynuclear aromatic hydrocarbons (PAHs)	Groundwater, Surface Water, Soil	Open - Remediation	ENVIROSTOR, CPS-SLIC, WMUDS/SWAT, CERS HAZ WASTEL
Note: *Several sources were grouped together due to being interrelated and at the same location. Source: Appendix G .					

Local Hazard Mitigation Plan—Contra Costa County

The Local Hazard Mitigation Plan serves as a coordinating document to help more than three dozen local agencies and special purpose districts reduce their risks from a wide range of potential events. Those include multiple types of hazards, from earthquakes and floods to wildfires and extreme heat. The updated 2018 plan was officially adopted on June 8, 2018.

Contra Costa County Community Awareness and Emergency Response

Contra Costa County Community Awareness and Emergency Response (CAER) Group is a public cooperation of emergency response agencies, local government officials, and facilities and businesses

that use, store, handle, produce, or transport hazardous materials. The goals of the CAER Group are to ensure safe industrial facility operations, to promote/create coordinated emergency response, to have an effective safety sharing forum, and to build a trust-based relation with the community. To achieve its respective goals, the CAER Group engages in open communication with the public about safety concerns regarding industrial facilities and promotes a coordinated mutual emergency aid, among other tasks.

Chevron®-Richmond Refinery

In the event of a hazardous materials release at the nearby Chevron®-Richmond Refinery, Contra Costa Health Services (CCHS) would activate the Community Warning System (CWS) to alert the community of North Richmond that such a release has occurred. If the CWS is triggered, then Chevron®-Richmond Refinery employees may be required to evacuate. Currently, the Chevron®-Richmond Refinery evacuation routes are oriented away from the Project Site, towards the core of the City connecting directly to Castro Street. These evacuation routes utilize surface streets that would not directly impact potential evacuation routes from the Project Site along Stenmark Drive via Interstate 580 (I-580) and by water routes. In the event of a mass evacuation from the Chevron®-Richmond Refinery, routes connecting directly to Castro Street would be the preferred evacuation routes.

Airports

The nearest airports are the San Rafael Airport located approximately 6.8 miles northwest, Gness Field located approximately 15.2 miles north, and Buchanan Field located approximately 20 miles east of the Project Site. The Project Site is not located within an area covered by an airport land use plan or within 2 miles of a public use airport, or in the vicinity of a private airstrip.

4.7.3.3. Fire Hazards

As described in **Section 3.2.4.4**, the Project Site is characterized by steep slopes and the presence of several vegetation communities, including annual grassland, coastal scrub, mixed riparian, eucalyptus woodland, and invasive scrub. On-site fuel loading is significant given the wide distribution of eucalyptus woodlands and associated ladder fuels. The Project Site is bound by the Bay to the west, open space parcels to the north and south, and the Chevron®-Richmond Refinery to the east, with the 480-foot hillsides of Potrero Ridge separating the refinery from the Project Site. As discussed in **Section 4.2.3.1**, precipitation primarily occurs from November through March with summer temperatures averaging 71.0 degrees Fahrenheit (°F) in July and winter minimum temperatures averaging 42.5°F in January. Fog is probable to occur during June through mid-August with the mean relative humidity remaining above 60 percent but below 80 percent throughout the year. Prevailing wind directions in the Bay Area are westerly or northwesterly during the summer and easterly or westerly during winter. Mean wind speeds are 6 to 10 miles per hour throughout the year with May and June being the highest and November and December being the lowest. However, local geography can influence climatic factors, such as lessening the winds, boosting summer heat, and reducing fog cover (Pacific Gas & Electric [PG&E], 2006). Furthermore, the Bay Area occasionally experiences strong off-shore northeasterly winds known as the “Diablo Winds” that are dry and hot. These winds occur primarily in summer and fall and have been known to exacerbate northern California wildfires (San Jose State University, 2019).

The Project Site is located within a Very High Fire Hazard Severity Zone as designated by the City of Richmond Fire Department (**Figure 4.7-2**). Development within a Very High Fire Hazard Severity Zone is subject to City standards regarding building materials and surrounding vegetation management. Very High Fire Hazard Severity Zones are designated based upon the fuels, terrain (e.g. slopes), weather (e.g. wind), and other relevant factors of a given area. Due to climate change, the Project Site and other areas of City are expected to become more prone to wildfire hazard in the future (City of Richmond, 2016d).

4.7.4 2011 FEIR ANALYSIS

This section provides a summary of the impacts to hazards, hazardous material, and wildfire conditions analyzed for the Casino Project of the 2011 FEIR, followed by a description of any changes since the 2011 FEIR that relate to hazards, hazardous materials, and wildfire.

4.7.4.1. 2011 FEIR Summary of Impacts

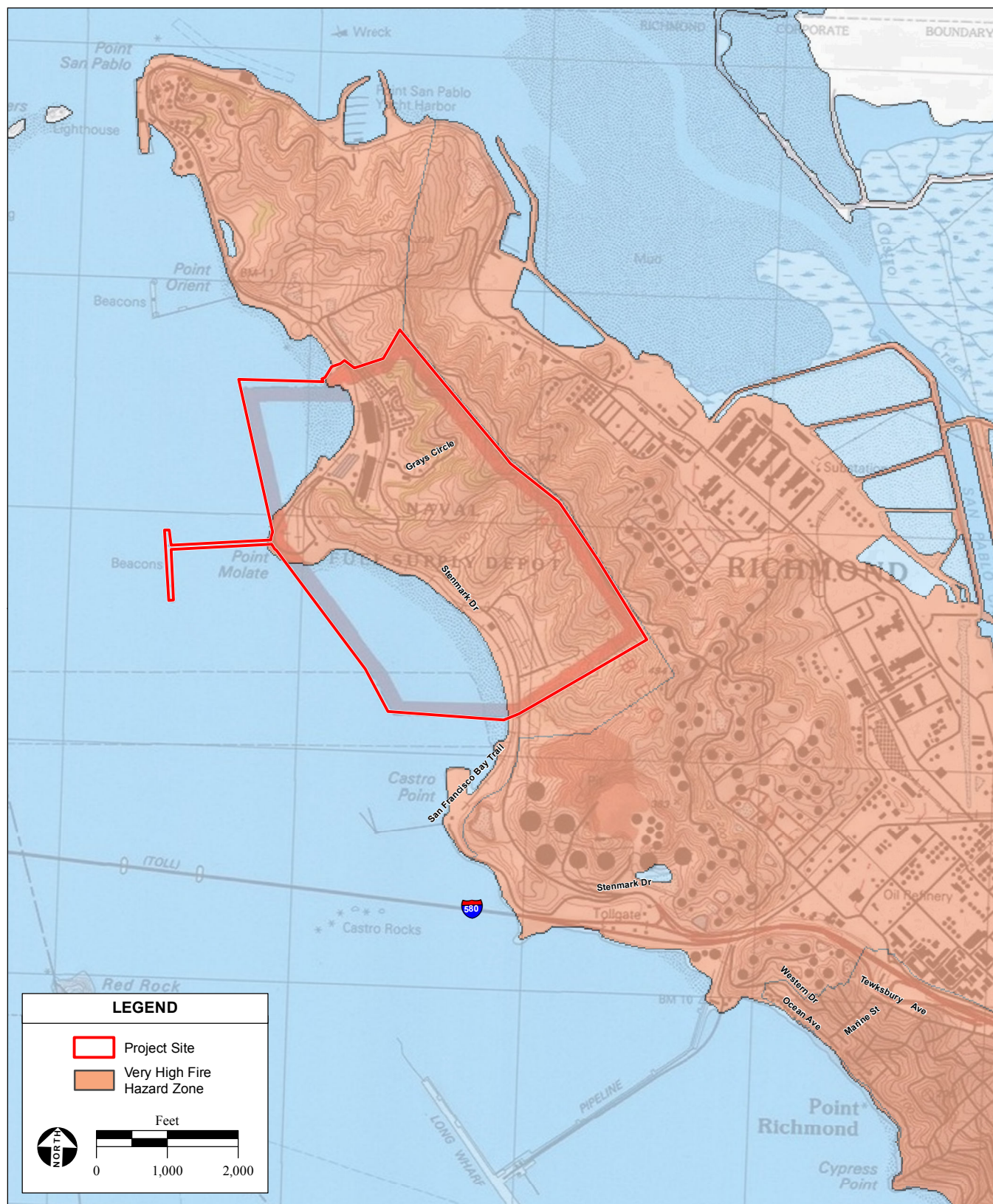
Project-Level Impacts

Implementation of the Casino Project would not have created a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. At the time of the 2011 FEIR, no hazardous materials had been stored on the Project Site since the Navy ceased fueling operations in 1996, and the transport of hazardous materials that would have been used for the proposed facilities would have been governed by appropriate regulations. The chemicals used and stored would have been relatively small in quantity, and would have been used and disposed of according to appropriate procedures and applicable regulations. Therefore, no hazards would have been created from the routine transport, use, or disposal, nor through reasonably foreseeable upset or accidental conditions involving the release of hazard materials. The 2011 FEIR concluded this impact would have been less than significant.

The Project Site contained contaminated soil from previous Navy operations onsite. While aggressive remediation would have taken place to remove impacted soils, the possibility existed for accidental release of contaminants from the ongoing environmental remediation or encountering new contamination. An unanticipated release of hazardous materials and/or the discovery of contaminated soils and groundwater could have resulted in potential significant impacts to humans and the environment. However, with mitigation, the 2011 FEIR concluded that this would have been a less-than-significant impact.

If an accidental ammonia release occurred at the Chevron®-Richmond Refinery, there would have been a very low probability of an ammonia cloud reaching the Project Site. In the event of an NH₃ vapor cloud reaching the Project Site, potentially significant human health impacts could have occurred. However, due to the low probability of this event occurring and active safeguards at the refinery at the time, the 2011 FEIR concluded that this would have been a less-than-significant impact.

The Project Site was not located within an area covered by an airport land use plan, within 2 miles of a public use airport, or in the vicinity of a private airstrip. The nearest airport was San Rafael Airport, located approximately 6.8 miles northwest. As such, the 2011 FEIR determined that no impact would



SOURCE: City of Richmond, 2019; "San Quentin, CA" USGS Topographic Quadrangle, T1N, R3W, Unsectioned Area of San Pablo Strait, Mt. Diablo Baseline & Meridian;
AES, 10/15/2019

- Point Molate Mixed-Use Development SEIR / 216544 ■

have occurred.

Development areas associated with the Casino Project were included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 (Cortese List). Specifically, the following areas were identified as being on the Cortese List: IR Site 1 (Former Landfill); IR Site 2 Areas A and B (Winehaven Historic District [Historic District]); IR Site 2 Areas C, D, and E (Drum Lot 2); IR Site 3: Treatment Ponds Area; IR Site 4: Northern and Southern Shoreline Areas and Drum Lot 1; IR Site 4: Drum Lot 2 and Building 87; and USTs – Hillside Areas (**Figure 3-10**). This would have been a potentially significant impact. However, additional remedial actions would have been undertaken to address the potential human health before development as part of a several mitigation measures. Therefore, the 2011 FEIR concluded that this impact would have been less than significant with mitigation.

There were no schools within 0.25 miles of the Project Site. The nearest school was Washington Elementary School located approximately 2.55 miles to the southeast. Therefore, the 2011 FEIR determined that no impact would have occurred.

The Project Site was classified as Very High Fire Hazard Severity Zone by the City, and the fuel loading on the Project Site increased the risk of significant loss, injury, or death involving wildland fires. However, the 2011 FEIR concluded that adhering to applicable fire building codes and implementing a Vegetation Management Plan during project operation as mitigation would have reduced the potential fire risks to a less-than-significant level.

Cumulative Impacts

The 2011 FEIR determined that impacts from the Casino Project, in combination with other foreseeable projects, would not result in significant cumulative hazards to the public or the environment through the routine transport, use, or disposal of hazardous materials. Furthermore, the Casino Project, in combination with other foreseeable growth in the area, would not have resulted in cumulatively significant hazards resulting from reasonably foreseeable upset or accidental conditions involving the release of hazardous materials into the environment. No bulk storage of hazardous materials would have occurred onsite during project operation. Furthermore, there would have been a net reduction in COCs that would have had the potential to negatively impact human health or the environment through an accidental release due to the remediation activities occurring and planned for the Project Site. Finally, the 2011 FEIR determined that the Casino Project, in combination with other foreseeable growth in the area, would not have physically interfered with an adopted emergency response plan or emergency evacuation plan. The Chevron® Energy and Hydrogen Renewal Project, located at the Chevron®-Richmond Refinery, was the only project within 3.5 miles of the Project Site. In the event that it was necessary to evacuate the Chevron®-Richmond Refinery, the vast majority of employees would have exited the facility from the points of entry along Castro Street and then accessed I-580 from there. Therefore, the 2011 FEIR determined that no cumulative impact would have occurred.

The 2011 FEIR determined that the Casino Project, in combination with other foreseeable projects, would have had a less-than-significant impact from the risk of loss, injury, or death involving wildland fires, including wildlands adjacent to urbanized areas or where residences are intermixed with wildlands, because the City was highly urbanized with very little wooded open space. Furthermore, all of the

planned or approved cumulative projects would have occurred in areas well outside of wildland-urban interfaces. Therefore, the 2011 FEIR concluded that cumulative impact from wildland fire would have been less than significant.

4.7.4.2. Changes Since the 2011 FEIR

In addition to the changes to the Modified Project, since the 2011 FEIR, the Project Site has undergone additional remediation activities, including the following.

- Additional USTs have received regulatory closure since 2011: USTs 4, 12, and 14.
- IR Site 3 had extensive remediation activities performed in 2014 and 2015, including the removal and disposal of approximately 100,000 cubic yards (cy) of contaminated soils. The excavation occurred up to 20 feet bgs. While IR Site 3 requires additional remediation activities, such as continued groundwater monitoring for contamination, the RWQCB has concurred that soil remediation has met the Remedial Action Completion Report, although official regulatory approval is pending as of the writing of this Draft SEIR.
- Groundwater remediation was conducted in 2012 and 2013 at IR Site 4, Drum Lot 2 to reduce groundwater concentrations of chlorinated solvents. Since remediation, the average decrease of chlorinated solvents has been 95.1 percent in relation to baseline conditions. However, the HHRA Work Plan prepared in 2016 to identify and evaluate the available data for Drum Lot 2 to determine if additional remediation is necessary is still pending approval from RWQCB as of the writing of this Draft SEIR.

Furthermore, new environmental standards or conditions have occurred since the 2011 FEIR, including the following.

- The former small arms firing range and Areas A and B of IR Site 2 were closed for unrestricted site uses by the RWQCB. However, changing regulatory screening criteria indicate that additional work may be necessary in these areas to meet residential site use standards.
- The Richmond Beltline Railroad (**Figure 3-3**, discussion in **Section 4.4.3.2**) was discovered to have Pb and arsenic detected in the soil during the investigation of the Phase II for the San Francisco Bay Trail (Bay Trail) at Point Molate Initial Study/Mitigated Negative Declaration (IS/MND). Therefore, the shallow soil adjacent to the railroad tracks may be contaminated with further pollutants than creosote and PAH.
- The Chevron®-Richmond Refinery has undergone a modernization that has increased its NH₃ production by 0.08 percent over previous levels.

Appendix G of the CEQA Guidelines significance thresholds have changed since 2011 with the addition of a new environmental resource area: wildfires. This section added four new significance thresholds for this resource area, including significance thresholds addressing indirect effects from wildfires (e.g. landslides), fire risk from utility development and maintenance, and existing environmental conditions effects on wildfire intensity. The significance thresholds for hazardous materials and hazards has remained unchanged since the 2011 FEIR.

The City adopted a new General Plan in 2012 that reorganized and rewrote the former General Plan. The updated General Plan has added new content concerning hazardous waste compared to the former General Plan. The new content includes a policy for the cleanup and reuse of contaminated sites and a policy for hazardous material operations. The content concerning fire prevention and safety has remained primarily the same with the exception of a new emphasis on public awareness concerning risk of fire.

4.7.5 IMPACTS

4.7.5.1. Thresholds of Significance

Criteria for determining the significance of impacts hazards, hazardous materials, and wildfire have been developed based on Appendix G of the CEQA Guidelines and relevant agency thresholds. Impacts associated with hazards, hazardous materials, and wildfires would be considered significant if the Modified Project would do any of the following.

1. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials
2. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment
3. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 miles of an existing or proposed school
4. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would create a significant hazard to the public or to the environment
5. For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or a public use airport, would the project result in a safety hazard for people residing or working in the project area
6. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan
7. Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands
8. Substantially impair an adopted emergency response plan or emergency evacuation plan
9. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations for a wildfire or the uncontrolled spread of a wildfire
10. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment
11. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes

4.7.5.2. Method of Analysis

This section identifies any impacts related to hazards, hazardous materials, and wildfires that could occur from construction and operation of the Modified Project. Impacts from the Modified Project related to

hazards, hazardous materials, and wildfires were analyzed based on an examination of the Project Site, published information regarding the existence of hazardous materials and wildfires in and near the Project Site, and field studies. This analysis focuses on the manner in which development could create significant impacts associated with hazards, hazardous materials, and wildfires in or near the Project Site under baseline conditions, which are defined for the purposes of the analysis in this section as physical conditions in the vicinity of the study area on or around the publication of the NOP in July 2019. When assessing potential impacts, Option-1 (Residential-Heavy Scenario) was assumed in order to assess the worst-case scenario. Development of both Options 1 and 2 would have similar operational impacts. However, Option 1 was chosen as the worst-case scenario because residential-heavy development would expose more residents to hazards for a longer time period than Options 2. Where it was concluded that impacts from the Modified Project on hazards, hazardous materials, and wildfires would exceed the significance thresholds listed above, mitigation measures have been identified to reduce impacts to the extent feasible.

Analysis of potential impacts resulting from substantial impairment of adopted emergency response/evacuation plans was achieved in the following manner. First, all relevant and available emergency response/evacuation plans were compiled and examined for the area using the same routes to which the Modified Project would add traffic. Elements of the Modified Project with any potential to interfere with established plans were considered. Risks posed by the threat of wildland fires were analyzed by identifying the classification of the Project Site according to the CAL FIRE potential fire severity mapping system. Based on this classification, appropriate state and local regulations were reviewed to further assess the potential risk of the Modified Project exacerbating or creating fire risk, including the determination of appropriate mitigation measures.

Although not required by CEQA guidelines, impacts from the environment on the Modified Project are included as part of the analysis for this section for informational purposes.

4.7.5.3. Effects Found Not to be Significant without Further Analysis

Review of the Modified Project in comparison with the existing setting conditions using the above significance thresholds shows that no significant impacts would be associated with the following Modified Project components for the reasons stated below.

The Modified Project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 miles of an existing or proposed school.

There are no schools located within 0.25 miles of the Project Site. The nearest school is Washington Elementary, located approximately 3 miles away. Therefore, the Modified Project would not affect schools within 0.25 miles of the Project Site with hazardous emissions or the handling of hazardous materials, therefore further discussion of this issue area is not included within this Draft SEIR.

The Modified Project is not located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or a public use airport and therefore would not result in a safety hazard for people residing or working on the

Project Site.

There are no airports near the Project Site. The nearest public airport is Gness Field, located approximately 15.2 miles to the north; the Oakland International Airport is located approximately 19 miles away. The nearest private airport is the San Rafael Airport that is located approximately 6.8 miles away. Therefore, the Modified Project would not cause potential hazardous material impacts to people residing or working at airports within 2 miles of the Project Site, and further discussion of this issue area is not included within this Draft SEIR.

The off-site infrastructure improvements would not exacerbate wildfire risks due to slope, prevailing winds, and other factors, and thereby expose Modified Project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.

As seen in **Figure 4.0-1**, the off-site infrastructure improvements would include road widening, underground and aboveground utility line upgrades, and the potential construction of the wastewater pipeline connecting the Project Site to either the Chevron®-Richmond Refinery (Wastewater Treatment Variant A) or City wastewater treatment plant (WWTP; Wastewater Treatment Variant B) and would be located east and southeast of the Project Site. Similar to the Project Site, the most northern and northwestern portion of the off-site infrastructure improvements would be within the local responsibility area (LRA) High Fire Hazard Severity Zone. However, the off-site infrastructure improvements would predominantly be within an LRA unzoned fire hazard severity area (CAL FIRE, 2007). There would be no occupants where the off-site infrastructure improvements would be located and therefore no adverse risk from indirect effects from a wildfire would exist.

4.7.5.4. Project-Level Impacts

IMPACT 4.7.1	CREATE A SIGNIFICANT HAZARD TO THE PUBLIC OR THE ENVIRONMENT THROUGH THE ROUTINE TRANSPORT, USE, OR DISPOSAL OF HAZARDOUS MATERIALS
Significance Before Mitigation	Potentially Significant
Mitigation Measures	Modified Project Mitigation: MM 4.7-4 Bay Trail IS/MND Mitigation: HAZ-1; HAZ-2
Significance After Mitigation	Less Than Significant
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

Hazardous Material Transport

During the estimated 7- to 9-year construction period, limited hazardous materials would be transported onsite and offsite for maintenance of the construction equipment and construction of the residential and commercial areas, such as diesel fuel, lubricants, paints, paint thinners, lubricants, and more. Hazardous debris and soil that is California certified as hazardous material would be hauled as part of the remediation process described in **Section 3.5.2**. Transportation of any hazardous materials would be

governed by federal and state regulations to ensure proper transport. Furthermore, transportation of the contaminated soil and hazardous debris would abide by not only applicable State and federal regulations, but also by the best management practices (BMP) specifically described in the SGWMP (Appendix D of **Appendix G**). Abiding by these regulations and the SGWMP for hazardous materials would minimize injury to human health and the environment during transportation. However, there is the potential for a significant impact due to handling and transport of contaminated materials associated with the remediation efforts. **Mitigation Measure 4.7-4** would ensure that remediation would be conducted pursuant to RWQCB standards, which would reduce the impact to a less-than-significant level.

During operations, Modified Project-related transport of hazardous materials would be limited to periodic transport of diesel fuel for the two on-site emergency generators. The transport of diesel fuel would be small in quantity, would occur irregularly based on the use of the emergency generators, and would follow appropriate laws and regulations. Thus, it would not present a significant hazard to the public. Other chemicals necessary for the operations of the facilities proposed under the Modified Project would also require transport. These would include cleaning supplies, pesticides, herbicides, and fertilizers, some of which could be potentially hazardous. Furthermore, the regular transport of chemicals for the WWTP, if Wastewater Treatment Variant A is approved and implemented, would also be necessary. These chemicals would consist most likely of sodium hypochlorite and citric acid, with each chemical being transported in a 15 to 55 gallon drum at a time. Although the transport of cleaning supplies, pesticides, herbicides, and fertilizers would occur more frequently, their transport would be governed by federal and State laws to ensure proper transport, thus minimizing injury to human health and the environment. Thus, implementation of the Modified Project would result in a less-than-significant impact.

Hazardous Materials Use

The Modified Project would require limited hazardous material uses during construction as described above. If these chemicals were stored in large quantities and mishandled during construction, then a potentially significant impact could occur as a result of this. However, the potential risk is very low as all of these chemicals would be governed by federal, State, and local laws. These laws include provisions for labeling and notification of employees about potential environmental hazards for chemicals in the work place. For instance, OSHA regulations include provisions that require facilities to document the potential risk associated with the storage, use, and handling of toxic and flammable substances. OSHA regulations are codified in 29 CFR Parts 70-71, 1910-1990, 2200-2205, and 2400. Because such laws and regulations would be adhered to, hazardous materials would be stored and used in a manner that minimizes human health hazards and injury to the environment. Therefore, a less-than-significant impact would occur as a result of hazardous materials use onsite.

The Modified Project would require common hazardous materials for commercial operations and have diesel-powered generators that require a limited amount of hazardous materials (discussed further in the next paragraph). The common hazardous materials that would be used include cleaning materials, floor strippers, cleaning solvents, herbicides, pesticides, fertilizers, diesel fuel, and mechanical lubricants that would be used onsite, all of which would be governed by federal, State, and local laws. These laws include provisions for labeling and notification of employees about potential environmental hazards for chemicals in the work place. For instance, OSHA regulations include provisions that require facilities to document the potential risk associated with the storage, use, and handling of toxic and flammable

substances. OSHA regulations are codified in 29 CFR Parts 70-71, 1910-1990, 2200-2205, and 2400. Another example of a federal regulation is FIFRA. This regulation requires that pesticide application occur in a manner consistent with product label instructions. Because such laws and regulations exist, it increases the likelihood that hazardous materials would be stored and used in a manner that minimizes human health hazards and injury to the environment. Furthermore, the majority of chemicals stored are common to commercial sites during the operation of the facilities included under the Modified Project. These chemicals do not pose unusual storage, handling, or disposal issues. Furthermore, the risk of creating a sufficient hazard to the public or environment due to a spill or misuse is very low due to the relatively small quantities of cleaning and landscaping materials that would be stored onsite. Thus, given the applicable federal regulations that are in place requiring facilities to document potential risks, a less-than-significant impact would occur.

Diesel-powered generators would be necessary for commercial development fire suppression systems and as a secondary power source for the facilities planned under the Modified Project. In case of emergency or periodic maintenance, the generators would be self-contained units equipped with double walled fuel tanks and leak detectors. Although unlikely, if a fuel leak were to occur, the outer tank would contain the leak. Security personnel would monitor the leak detection system. Because of containment measures and leak monitoring, the presence of diesel fuels on the Project Site would not result in a significant hazard to the public or environment. Consequently, a less-than-significant impact would occur under the Modified Project due to diesel-powered generators.

Under Wastewater Treatment Variant A of the Modified Project, an on-site WWTP would be developed to satisfy the wastewater treatment requirements of the commercial and residential development proposed. The storage and use of potential hazardous materials would be necessary for the operation of the on-site WWTP. For example, common wastewater treatment chemicals that could be used would be sodium hypochlorite and citric acid. These chemicals would each be stored in a 15- to 55-gallon drum onsite within a secure building, with secondary containment, and only qualified personnel would handle these chemicals. The quantities of these chemicals would be relatively small, and with appropriate management—such as the following of guidelines by the manufacturer—no significant adverse effects would result from storage and use. Should the sodium hypochlorite—which would exceed CERCLA's Reportable Quantity of 100 pounds for this hazardous material—spill, then this incident would be reported under the specifications outlined in CERCLA. Consequently, despite the addition of a WWTP under the Modified Project, the Modified Project is unlikely to create a higher risk due to the chemical use of the on-site WWTP. Therefore, a less-than-significant impact would occur.

The off-site infrastructure improvements would require little to no hazardous materials during operation. The limited use of hazardous materials that might occur would be for maintenance purposes, and these hazardous materials would be used according to applicable State and federal regulations. Therefore, a less-than-significant impact would occur.

Disposal of Hazardous Materials

As stated previously, the Modified Project would require the use of limited hazardous materials and would generate and transport hazardous debris and soil offsite for disposal during construction, which includes remediation. If these hazardous materials were not disposed of properly, then a potentially significant

impact to human health and the environment could occur. However, under the Modified Project, the hazardous materials used and the hazardous debris generated would be disposed of according to federal, State, and local laws. Furthermore, hazardous chemicals used onsite would be used and disposed of according to the guidelines of the manufacturer. Hazardous construction and demolition materials and California-certified hazardous material soil would result from the implementation of the Modified Project. The hazardous construction and demolition materials would be separated from those that can be recycled or disposed of to ensure that hazardous debris would be disposed of properly at a licensed landfill, such as Kettleman Hills Facility (Soot, 2020). Alternatively, Republic Services, Inc. or other sufficiently licensed operator can transport and properly dispose of hazardous wastes at a third party facility and Republic Services has confirmed it has sufficient capacity to accept the Modified Project's hazardous waste (Eremian, 2019). In addition, the hazardous construction and demolition materials and the hazardous soil would abide by the BMPs outlined in the SGWMP for disposal, including performance of work by OSHA hazardous waste operations and emergency response (HAZWOPER)-trained workers under the oversight of a qualified environmental professional, proper waste segregation and stockpile management, compliance with applicable federal, State, and local regulations for transport and disposal, and protocols for identification and characterization of hazardous wastes. Furthermore, ACMs from demolition would be in sealed, leak-tight, non-returnable containers (e.g., plastic bags at least 6-millimeters in thickness, cartons, drums, or cans) from which the fibers cannot escape. Additionally, the wastes would be wetted to prevent fibers from becoming airborne in the event that the container is broken (Appendix D in **Appendix G**). Finally, construction personnel would be trained on the proper procedures for hazardous material disposal as required by OSHA and Cal/OSHA regulations. However, given the existing contamination, the risk from the disposal of hazardous materials would potentially significant. **Mitigation Measure 4.7-4** would ensure that remediation would be conducted pursuant to RWQCB standards, which would reduce the impact to a less-than-significant level.

As stated above, the Modified Project would necessitate the use of chemicals during operations, such as cleaning supplies, solvents, pesticides, and herbicides. Under the Modified Project, the chemicals would be used and disposed of as directed and according to guidelines of the manufacturer, including the chemicals used for the WWTP if Wastewater Treatment Variant A is approved and implemented. This assumption is reasonable because compliance with such directions and guidelines would be expected to maximize the effectiveness of such products while minimizing risks of harm to employees and patrons. Furthermore, regulations set forth in OSHA would be adhered to in order to further ensure the safety of employees and patrons. All materials transported to the Project Site would be disposed of as directed, therefore no inadvertent or incorrect disposal of these chemicals would occur onsite. No storage of bulk pesticides and fertilizers would occur during Modified Project operation, thus potential environmental injury from inadvertent disposal of pesticides and fertilizers would not occur. While WWTP chemicals may be stored in larger quantities (15- to 55-gallon drums at most), laws and regulations pertaining to larger storage would be followed, including the laws related to disposal. Examples of regulations for transport and disposal include CERCLA, Hazardous Waste Control Law, and Title 13 of the CCR, Division 2, Chapter 6, Article 3, §§ 1160-1167. Therefore, this impact would be less than significant.

Off-Site Infrastructure Improvements

Construction

Similar to construction activities at the Project Site, hazardous materials would be used in varying quantities during construction of off-site infrastructure improvement. Therefore, the hazardous material risks to the environmental and construction personnel health would be similar. The use, storage, transport, and disposal of hazardous materials associated with construction activities would be thoroughly regulated at the federal, State, and local levels to ensure public and environmental health and protection. Therefore, construction of off-site infrastructure improvements would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials and this impact would be less than significant.

Operation

The operation of the off-site infrastructure improvements would require very little hazardous materials because maintenance would only be occasional and hazardous materials would not be used frequently. The limited quantity of hazardous materials that may be used for maintenance would be handled, stored, disposed of, and transported according to applicable federal, State, and local regulations and guidelines. Therefore, the operation of the off-site well and associated pipeline would be a less-than-significant impact.

Construction of the Bay Trail

Impacts as a result of the construction and implementation of the Bay Trail are analyzed within the Bay Trail IS/MND, which is incorporated by reference, as described within **Section 1.4.4**. The Bay Trail IS/MND determined that impacts from the construction of the Bay Trail creating a significant hazard to the public or environment through routine transport, use, or disposal of hazardous materials were less than significant after mitigation because construction of the Bay Trail would require the movement and handling of soil with arsenic concentrations above background levels, including potentially contaminated soils not previously identified, as well as existing abandoned structures located near the proposed trail alignment that may contain hazardous building materials and pose a physical hazard to trail users. The Bay Trail IS/MND identified **Mitigation Measures HAZ-1** and **HAZ-2**, described in **Section 4.7.6**, which would reduce the impacts to a less-than-significant level by requiring fencing to restrict access to areas known to contain contaminated soils and capping requiring soils known to contain elevated levels of arsenic to be in restricted areas, capped in place, or relocated and capped. As a result of the construction of the Bay Trail and implementation of **Mitigation Measures HAZ-1** and **HAZ-2**, impacts related to creating a significant hazard to the public or environment through routine transport, use, or disposal of hazardous materials would be less than significant with mitigation.

IMPACT 4.7.2	CREATE A SIGNIFICANT HAZARD TO THE PUBLIC OR THE ENVIRONMENT THROUGH REASONABLY FORESEEABLE UPSET AND ACCIDENT CONDITIONS INVOLVING THE RELEASE OF HAZARDOUS MATERIALS INTO THE ENVIRONMENT DUE TO THE MODIFIED PROJECT
Significance Before Mitigation	Potentially Significant
Mitigation Measures	Modified Project Mitigation: MM 4.7-4
Significance After Mitigation	Less Than Significant
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

Remediation

As discussed in **Section 3.5.2**, remediation would occur as part of the implementation process for the Modified Project in order to be compliant with Order No. R2-2011-0087 and to ensure that the Project Site is safe for residential and commercial development. Therefore, contaminated soils that have been affected by past Navy operations on the Project Site may be excavated as part of the remediation activities, and select existing features, such as USTs, and certain segments of Beltway Railway would be removed as necessary. The possibility exists for accidental release of contaminants, such as contaminated soil, from the ongoing environmental remediation. Furthermore, debris from the demolition of existing buildings could contain lead-based paint and ACMs and be a health concern if not managed properly. BMPs outlined in the SGWMP would reduce these impacts, including those for dust and air mitigation measures to reduce fugitive contaminated soil, stormwater management, waste transport and disposal, building demolition criteria (including for ACMs and lead-based paint), on-site hazardous material management, and other BMPs that minimize the accidental release of hazardous materials during remediation. Examples of BMPs that would prevent accidental release include the proper covering of stockpiles, provision of adequate aisle space for drums, use of portable tanks with appropriate secondary containment for hazardous waste, removal of hazardous waste onsite within 90 days, and proper training of personnel in HAZWOPER (Appendix D in **Appendix G**). Furthermore, the vast majority of the excavated soils are anticipated to be nonhazardous (**Table 3-3**) by federal and State standards and would be disposed of at the Altamont Landfill, Kirby Canyon, Kettleman Hills Facility, or another equivalent facility.

The impacted soils that are California-regulated hazardous waste could be processed by Waste Services Group located in San Francisco or equivalent appropriately licensed contractor. This company can manage up to 3,000 tons per day from the Project Site. Material managed by the appropriately licensed contractor would be picked up by truck and delivered to the San Francisco Waste Services Railyard for transloading and rail shipment to the ECDC landfill in East Carbon, UT (Eremian, 2019). Alternatively, the waste could be transported and disposed of directly at an appropriately licensed facility, such as Kettleman Landfill Facility (Soot, 2020). As discussed in **Impact 4.7.1**, during transport, the hazardous materials that originate from construction would be transported according to applicable State and federal regulations and BMPs set forth in the SGWMP. These BMPs include having appropriate traffic safety

mitigation, setting soil haul truck routes, and giving 24-hours in advance of when 20 or more trucks of waste materials are leaving the Project Site per day (Appendix D in **Appendix G**). Following these BMPs would reduce the probability of an accidental release of hazardous materials. Therefore, following the BMPs in the SGWMP and properly disposing of the limited hazardous soil would reduce the potential risk from the accidental release of hazardous materials. Given the presence of contamination, however, this impact is potentially significant. **Mitigation Measure 4.7-4** would ensure that remediation would be conducted pursuant to RWQCB standards, which would reduce the impact to a less-than-significant level.

On-Site Construction

The possibility exists that undiscovered contaminated soil and/or groundwater could be in the Project Site and/or in off-site infrastructure improvement areas. Construction personnel could encounter contamination during earth-moving activities. Furthermore, during the demolition of buildings constructed prior to 1978, construction personnel could be exposed to lead-based paint and ACMs. The unanticipated discovery of contaminated soil and/or groundwater and exposure to lead-based paint and ACMs could result in potential human health and environmental impacts. However, BMPs outlined in the SGWMP would lessen the impacts of these potential discoveries through the setting of proper procedures to identify and handle potential contamination. BMPs include screening of soil analytical data by a qualified geologist or engineer before excavation/construction, reviewing groundwater records before extraction, notifying appropriate parties of discovered contamination (e.g., RWQCB), and having personnel properly training in HAZWOPER. Furthermore, there are BMPs in the SGWMP for the proper handling and disposal of lead-based paint and ACMs to prevent accidental releases, which include performing an asbestos and lead-based paint abatement according to applicable regulations prior to demolition activities (Appendix D in **Appendix G**). These regulations would include NESHAP and BAAQMD Regulation 11 (Hazardous Pollutants), Rule 2 (Asbestos Demolition, Renovation, and Manufacturing), both of which regulate the demolition of buildings or structures that may contain asbestos (for more information asbestos air regulations, see **Section 4.2.2** and **Section 4.7.2**). Thus, this impact would be less than significant.

During construction, limited quantities of miscellaneous hazardous substances such as fuels, solvents, oils, and paint would be used and stored at the Project Site and the off-site infrastructure improvement areas. Construction contractors would be permitted to use temporary bulk ASTs as well as storage sheds or trailers for fueling and maintenance purposes. If properly used, stored, and disposed of, these materials would not be a hazard to humans or the environment. However, spills or leaks could pose a hazard to on-site construction personnel if these materials are not properly used, stored, or disposed of. The presence of hazardous materials on the construction site during construction could create a significant environmental impact if spilled in such quantities that residual impacts and potential contamination would occur. However, adhering to applicable State and federal regulations, such as OSHA and Cal/OSHA regulations, for storing hazardous materials often eliminates the potential for such spills to occur. Additionally, the BMPs outlined in the SGWMP, such as handling storage containers to prevent leaks, performing weekly inspections of hazardous waste storage areas, and ensuring wastes are in compatible containers (Appendix D in **Appendix G**), would be required during implementation of the Modified Project to minimize the risk of accidental spills and minimize harm in the event of an accident. Therefore, implementation of the Modified Project would result in a less-than-significant impact.

Construction of Off-Site Improvements

The accidental release of hazardous materials used during grading and construction activities could pose a hazard to construction employees and the environment. However, these hazards are common to construction activities and would be minimized with adherence to standard operating procedures, such as refueling in designated areas and storing hazardous materials in approved containers. These potential hazards are considered less than significant.

On-Site Hazardous Materials

Under the Modified Project, no significant impacts relating to accidental conditions involving future on-site hazardous materials are anticipated. While hazardous materials would be stored onsite, the potential for an accidental release that would significantly impact human health or the environment would only minimally increase. Most on-site hazardous materials are expected to be limited to small quantities of cleaning and landscaping materials as well as diesel fuel for the on-site emergency generators. For the small quantities of diesel stored onsite for the generators, the diesel storage tanks would be self-contained and equipped with leak detectors. Other chemicals, such as cleaners and landscaping chemicals, would not be used in such large quantities that an accidental spill would create a significant environmental impact. If Wastewater Treatment Variant A is selected, then larger quantities of chemicals would be needed for the WWTP. The WWTP chemicals would be stored within a secure building and only qualified personnel would handle these chemicals. Due to the relatively limited quantities of most hazardous materials that would be stored and used onsite, as well as the containment measures for diesel fuel and WWTP chemicals and the expectation that laws would be followed, the Modified Project would not result in a reasonably foreseeable upset or accident conditions involving the release of hazardous materials into the environment. Therefore, the Modified Project would have a less-than-significant impact related to creating a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

Off-Site Improvements Hazardous Materials

The operations of the off-site improvements are not anticipated to involve the storage or use of a large quantity of hazardous materials for maintenance. Therefore, no severe accidents involving hazardous materials are anticipated during maintenance. However, the off-site improvements involve the installation of a new underground gas line. While natural gas could pose an adverse effect if a leak from the gas line occurs, the gas line would be built according to applicable State and local regulations and regularly maintained. Therefore, the probability of an accidental release of gas is limited. This impact would be less than significant.

Construction of the Bay Trail

Impacts as a result of the construction and implementation of the Bay Trail are analyzed within the Bay Trail IS/MND, which is incorporated by reference, as described within **Section 1.4.4**. The Bay Trail IS/MND determined that impacts from the construction of the Bay Trail creating a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment were less than significant because no buildings or dwelling units would be constructed and therefore no impacts related to vapor intrusion to indoor air from

the migration of volatile chemicals in the subsurface would occur. Potentially hazardous materials would not be accidentally released during the operation of the Bay Trail. If hazardous materials would be used during construction of the trail, these materials would be contained and stored per OSHA and Stormwater Pollution Prevention Plan (SWPPP) requirements. As a result, construction of the Bay Trail would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment and the impact is less than significant.

IMPACT 4.7.3	BE LOCATED ON A SITE WHICH IS INCLUDED ON A LIST OF HAZARDOUS MATERIALS SITES COMPILED PURSUANT TO GOVERNMENT CODE § 65962.5 AND, AS A RESULT, WOULD CREATE A SIGNIFICANT HAZARD TO THE PUBLIC OR TO THE ENVIRONMENT
Significance Before Mitigation	Potentially Significant
Mitigation Measures	Modified Project Mitigation: MM 4.7-4 Bay Trail IS/MND Mitigation: HAZ-4
Significance After Mitigation	Less Than Significant
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

The Project Site is on a list of hazardous material sites compiled pursuant to Government Code § 65962.5, as a result there is a potential for the Modified Project to create a significant hazard to the public or the environment.

Since the Navy ceased fueling operations at the Project Site in 1995, hazards to the public and environment through the potential release of hazardous materials have been significantly reduced. Historical releases of hazardous materials and areas affected by Navy operations on the Project Site have been inventoried within existing Navy documents under the Navy IRP. As discussed in **Section 3.2.6**, the Project Site is currently subject to a land use restriction that limits how the site may be used and imposes other requirements for the protection of public health and the environment, such as the requirement that before construction may occur on the site, a Soil Management Plan must be prepared. There are also restrictions on the pumping and use of groundwater.

As stated in **Section 3.5.2**, remediation would be part of the process for redeveloping the Project Site under the Modified Project, under the oversight of the RWQCB, pursuant to the requirements of Order No. R2-2011-0087 (**Appendix G**). Even though remediation must adhere to RWQCB's remediation requirements, **Mitigation Measure 4.7-4** would ensure that this occurs by requiring the Modified Project to adhere to the RWQCB's requirements when remediating the Project Site. For each area of the Project Site, the RWQCB will determine what specific steps are necessary to reduce levels of existing contaminants to acceptable risk level, based on the proposed use for each area. Cleanup levels will be determined by the RWQCB, based on the contaminants at issue, the media in which the contaminants are present, and the proposed use of the particular area. In addition, once cleanup levels are achieved, the RWQCB may impose additional requirements regarding site construction, such as the use of vapor

intrusion mitigation systems to ensure indoor air in Project buildings does not exceed regulatory levels for contaminants such as chlorinated solvents, diesel, and other volatile compounds. Order No. R2-2011-0087 also requires ongoing monitoring efforts, including groundwater, and regulatory oversight provided by the RWQCB. Furthermore, for the entire Project Site, the 2012 approved SGWMP by the RWQCB would be adhered to during remediation and development on the Project Site. More information is provided below for each of the remediation areas pursuant to government code §65962.5. In summary, the Modified Project will be subject to oversight by the RWQCB, and the RWQCB is tasked with ensuring that the Modified Project will not pose a threat to human health or the environment; accordingly, as discussed in more detail below, the Modified Project will not have a significant impact with implementation of **Mitigation Measure 4.7-4**.

IR Site 1: Former Landfill

Remedial actions have been performed to address the potential human health and environmental impacts within the former landfill area, and no development is intended in this area under the Modified Project. Capping of the former landfill area has eliminated exposure pathways that would result in potential human health and environmental impacts, and because no development is planned in the location of the former landfill, the soil cap would remain in place. Furthermore, land use restrictions are in place at IR Site 1 to ensure soil cap integrity and to ensure no residential development occurs within the areas of the former landfill. The City is currently responsible for maintaining the soil cap, and the post-closure maintenance and monitoring that is conducted annually at IR Site 1 in accordance with the Site 1 Post Closure Maintenance and Monitoring Plan (PCMMP; **Appendix G**) and regulations set forth in Title 27 CCR Chapter 3, Subchapter 5 for landfill closure and monitoring. The water treatment system continues to operate at IR Site 1 to remove low levels of petroleum hydrocarbons contained in seepage collected from the landfill toe. Treatment activities are regularly reviewed for effectiveness and appropriateness of operations. Under the Modified Project, adverse environmental impacts could result if the soil cap and land use restrictions were not maintained according to the PCMMP (**Appendix G**). However, the land use restriction will remain in place for IR Site 1, no development will occur on IR Site 1, and the soil cap integrity within the former landfill would be maintained with monitoring. For development that would occur within 1,000 feet of IR Site 1 from Planning Areas B and C, the standards and procedures stipulated in CCR Title 27, Subchapter 5 for post-closure land use of former landfills would be adhered to (see **Section 4.7.2** for additional information), including submitting applicable plans and documentation to the appropriate enforcement agency for review and approval. Therefore, IR Site 1 would pose a less-than-significant risk to human health under the Modified Project.

IR Site 2: Sand Black Grit Areas

Under the Modified Project, IR Site 2 would be the location of the planned commercial and residential development in Areas 2A and 2B. As indicated in Table 1 of **Appendix G**, Pb and nickel concentrations detected in Areas 2A and 2B exceed the residential ESL for Pb and the construction worker ESL for nickel. If Areas 2A and 2B are not rehabilitated, such soils could pose a potentially significant human health impact for potential park maintenance workers and future residential site users. However, as specified in **Section 3.5.2**, soil excavation would be part of the remediation process under the Modified Project for Areas 2A and 2B. The SGWMP developed and approved by the RWQCB in 2012 includes BMPs for soil management to prevent impacts to the public and the environment, and these BMPs would be followed (Appendix D in **Appendix G**). Therefore, the Modified Project would not create or exacerbate

risks to the public or the environment from work in IR Site 2, and would thus result in a less-than-significant impact.

IR Site 3: Treatment Ponds Area

Under the Modified Project, Site IR Site 3 is the location of proposed new uses. Since the publication of the 2011 FEIR, between 2014 and 2015, IR Site 3 underwent extensive remediation, including the excavation of approximately 100,000 cy of contaminated soil that was disposed of offsite (**Appendix G**). As described in **Section 4.7.3.1**, IR Site 3 has generally met the Remedial Action Objectives of the Remedial Action Completion Report to permit residential use of the IR Site 3 area. However, the RWQCB has also issued letters stating that additional work is required to evaluate the potential risk to ecological receptors in the Bay from HOPs that remain in groundwater at IR Site 3. Based on correspondence comments on the Remedial Action Completion Report, additional groundwater assessment for the HOPs would not have impacts on the development of IR Site 3 as long as the contingency groundwater trench that was installed as part of the 2014 and 2015 remediation activities is unaffected. Furthermore, Planning Areas C and B do not contain building or structural components that are expected to disturb the groundwater, and the trench would not be affected as a result of the Modified Project. As stated in **Section 3.5.2**, if risks requiring groundwater treatment are identified, remediation would occur along the shoreline or in the contingency groundwater treatment trench installed at IR Site 3 in accordance with a RWQCB approved plan. If dewatering were required during construction, it would adhere to the BMPs in the site specific SGWMP—which would be similar to the current SGWMP in place for the Project Site (see Appendix D in **Appendix G** for the current SGWMP)—would assist in the proper management of contaminated groundwater, if encountered, and prevent its release to the public and the environment through proper containment, treatment, and/or disposal. For instance, groundwater extracted would be considered contaminated until proven otherwise. If the extracted groundwater is verified to not be contaminated, then the extracted groundwater may be discharged to a nearby storm drain under the Construction General Permit. If the groundwater is considered contaminated, then a groundwater management plan would be established in accordance with the RWQCB. The RWQCB also issued a letter generally concurring with the Remedial Action Completion Report regarding the soil remediation activities, but official regulatory approval has not been granted as of the writing of this Draft SEIR. As noted in **Section 3.5.2.3**, a component of the Modified Project description entails obtaining regulatory approval of the Remedial Action Completion Report. Therefore, the Modified Project would not create or exacerbate risks to the public or the environment from work in IR Site 3, and would thus result in a less-than-significant impact.

IR Site 4: Drum Lot 1 and 2

Under the Modified Project, the northern and shoreline areas and Drum Lot 1 and Drum Lot 2 would be developed with residential and commercial development. Development of IR Site 4 in its current condition could pose a potentially significant risk to the public and environment. However, as stated in **Section 3.5.2**, risk assessment and remediation (if required) of IR Site 4 would be conducted as part of the Modified Project. In the worst-case scenario, vapor mitigation would be required at Drum Lot 2 in the northwest portion and soil removal would be required to reduce potential risk to future site users. This work would be conducted in compliance with remediation plans approved by the RWQCB per the Order to ensure that significant risks to human health or the environment are not present during and after remediation activities. If remediation is required, the remedial plans will be developed under the oversight

of the RWQCB to ensure that human health and the environment are protected during remediation activities. Prior to beginning development activities in this area, a site-specific SGWMP would be developed for these areas and it would contain similar BMPs as the 2012 SGWMP for the Project Site (refer to Appendix D in **Appendix G**). For instance, BMPs to reduce the risk of fugitive dust during soil excavation and removal activities would be included in the site specific SGWMP in order that the Modified Project would not create or exacerbate risks to the public through the release of airborne contaminated soil. Thus, with the creation of this SGWMP before development of the IR Site 4, the impact from development would be less than significant.

Underground Storage Tanks

Under the Modified Project, several components are planned throughout the Project Site where USTs are located. These project components include residential units and commercial development. As discussed in **Section 3.2.6**, deed restrictions are in place that limit residential development on the Project Site. Some deed restrictions would be removed upon regulatory closure of the USTs and concurrence from the RWQCB. As discussed in **Section 3.5.2**, the removal of the USTs would be necessary as part of the redevelopment process for development of the Project Site. Specifically, large USTs 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 15, 17, 18, 19 and 20; the 15 small USTs in Parcel 15; and the 13,000-gallon tank at Building 6 would be removed as part of the Modified Project. The remaining USTs would not be subject to removal, although Tank 13 and 15 need to receive regulator closure before development. This approval from the RWQCB is currently pending.

The removal of the USTs is subject to the requirements of RWQCB Order R2-2011-087, Task 6 - UST Removal Plan. In the worst-case scenario estimates, the large hillside USTs would require approximately 1,800 cy of additional soil to be removed per UST due to petroleum contamination (excess from what would be required to demolish the UST to facilitate redevelopment) and an estimated 1,000 cy of soil for all the small USTs. The demolished USTs materials and impacted soil would then be moved offsite for disposal. This work would be complete in adherence to the UST Removal Plan that will comply with RWQCB oversight so as to be protective of human health and the environment. Adherence to the BMPs set forth in the SGWMP would also help reduce the risks during these activities and ensure proper disposal offsite. BMPs related to soil disrupting activities include, but are not limited to, dust control measures, decontamination of construction equipment and transportation vehicles, and procedures for working in contaminated soils (Appendix D in **Appendix G**). Compliance with the measures listed above would ensure that the Modified Project would not create or exacerbate risks to the public or the environment from work related to UST removal, resulting in a less than significant impact.

Construction of Off-Site Infrastructure Improvements

As discussed in **Section 4.7.3.1** none of the off-site records search were located adjacent or in the immediate vicinity of the off-site infrastructure areas. Therefore, the probability of the Modified Project creating a significant hazard to the public or to the environment from disturbing existing environmental contamination is improbable. In the event that undocumented contamination is discovered during the construction of the off-site improvements, then applicable federal, State, and local regulations, such as implementing a SWPPP, would be followed to ensure that the discovery would not become a public health or environmental concern. This impact, therefore, would be less than significant.

Construction of the Bay Trail

Impacts as a result of the construction and operation of the Bay Trail are analyzed within the Bay Trail IS/MND, which is incorporated by reference, as described within **Section 1.4.4**. The Bay Trail IS/MND determined that impacts from the construction of the Bay Trail as a result of being located on a listed hazardous materials site and the potential to create a significant hazard to the public or environment were less than significant after mitigation because although portions of the Project Site have been cited on the Cortese list, specific restrictions for use of the site in order to protect human health and safety and the environment may be implemented if additional soil removal is not undertaken to eliminate potential risks. The Bay Trail IS/MND identified **Mitigation Measure HAZ-4**, described in **Section 4.7.6**, which would reduce the impacts to less-than-significant levels as it would require implementation and construction of the Bay Trail to comply with the Land Use Controls document prepared for the NFD where applicable and adhere to relevant restrictions during construction. Prior to construction, a project-specific soils management plan and or equivalent health and safety plan would be prepared by the contractor under the direction of a of a Certified Industrial Hygienist, , and reviewed by the City for consistency with existing contractual requirements. As a result of the construction of the Bay Trail and implementation of **Mitigation Measure HAZ-4**, impacts related to creating a significant hazard to the public or environment as a result of being located on a listed hazardous materials site would be less than significant with mitigation.

IMPACT 4.7.4	IMPAIR IMPLEMENTATION OF OR PHYSICALLY INTERFERE WITH AN ADOPTED EMERGENCY RESPONSE PLAN OR EMERGENCY EVACUATION PLAN
Significance Before Mitigation	Significant
Mitigation Measures	Modified Project Mitigation: MM 4.7-1; MM 4.13-5
Significance After Mitigation	Less Than Significant
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

As discussed in **Section 4.7.3.2**, in the event of a hazardous materials release at the nearby Chevron®-Richmond Refinery, CCHS would activate the CWS to alert the community of North Richmond that such a release has occurred. If the CWS is triggered, the Chevron®-Richmond Refinery employees may be required to evacuate. In the event of a mass evacuation from the Chevron®-Richmond Refinery, routes towards the core of the City connecting directly to Castro Street would be the primary route. These routes do not include Stenmark Drive; however, access from the Chevron®-Richmond Refinery is provided along Stenmark Drive near I-580 and could be used by evacuees. Additionally, although not within an adopted plan, land uses north of the Project Site would use Stenmark Drive to evacuate the peninsula. Therefore, if Stenmark Drive were to be blocked or otherwise impaired during an emergency situation or evacuation, a significant impact could occur.

Construction

Onsite

As discussed in **Impact 4.13.11**, construction activities along Stenmark Drive may create delays, stoppages, and detours in construction area zones. Although these disruptions would only occur temporarily, even a temporary disruption of emergency access could result in a significant impact due to the time-sensitive needs and critical public services provided by emergency service providers. However, implementation of **Mitigation Measure 4.13-4** would ensure that Stenmark Drive would remain passable to through traffic 24 hours a day, seven days a week and reduce the potential impact related to the obstruction of emergency response to a less-than-significant level during construction.

Off-Site Infrastructure Improvements

Construction of the off-site infrastructure improvement areas would occur primarily along Stenmark Drive and therefore the public right of way. The impacts associated with the off-site construction would be similar to the on-site construction discussed above for Stenmark Drive. Consequently, implementation of **Mitigation Measure 4.13-4** would ensure that Stenmark Drive would remain passable to through traffic 24 hours a day, seven days a week and reduce the potential impact related to the obstruction of emergency response to a less-than-significant level during construction.

Bay Trail

Impacts as a result of the construction and implementation of the Bay Trail are analyzed within the Bay Trail IS/MND, which is incorporated by reference, as described within **Section 1.4.4**. The Bay Trail IS/MND determined that impacts from the construction of the Bay Trail on impairing implementation of or physically interfering with an adopted emergency response or evacuation plan were less than significant because there is no expected significant increase in the number of vehicles or an increase in traffic congestion that could interfere with an emergency evacuation or response plan. Additionally, the Bay Trail would be located within the previous railroad alignment, a portion of which is along private roads or roads which are currently closed to the public. Furthermore, the Bay Trail would not block emergency vehicle access along Stenmark Drive. As a result, construction of the Bay Trail would not result in impairing implementation of or physically interfering with an adopted emergency response or evacuation plan and the impact is less than significant.

Operations

Onsite

Stenmark Drive is the only vehicle access to the Project Site and would therefore be used should an emergency occur during operation of the Modified Project. If Stenmark Drive is an evacuation route for others on the San Pablo Peninsula, then the additional evacuation traffic from the Project Site could impede this evacuation route for others on the San Pablo Peninsula. This would result in a potentially significant impact. **Mitigation Measure 4.7-1** would require the development and implementation of a site-specific emergency response plan (ERP) that shall identify protocols, such as emergency evacuation routes via land and water and appropriate situations to shelter-in-place, in the event of an earthquake, wildfire, or chemical release. Implementation of the ERP would reduce the potential impact to a less-than-significant level by reducing the traffic on Stenmark Drive during emergency situations.

Off-Site Infrastructure Improvements

Once the off-site infrastructure improvements are completed, emergency evacuations routes would not be impeded because they would not physically interfere with evacuation routes. Furthermore, off-site infrastructure would only require occasional maintenance and therefore would not increase the number of people needing to evacuate from San Pablo Peninsula. Therefore, no impact would occur.

IMPACT 4.7.5	EXPOSE PEOPLE OR STRUCTURES TO A SIGNIFICANT RISK OF LOSS, INJURY, OR DEATH INVOLVING WILDLAND FIRES, INCLUDING WHERE WILDLANDS ARE ADJACENT TO URBANIZED AREAS OR WHERE RESIDENCES ARE INTERMIXED WITH WILDLANDS
Significance Before Mitigation	Potentially Significant
Mitigation Measures	Modified Project Mitigation: MM 4.7-2; MM 4.7-3; MM 4.3-13
Significance After Mitigation	Less Than Significant
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

The San Pablo Peninsula and therefore the Project Site have been classified as Very High Fire Hazard Severity Zone by the City.

Development on Project Site

The Project Site is characterized by the presence of several vegetative communities, including annual grassland, coastal scrub, mixed riparian, eucalyptus woodland, and invasive scrub. Moderate on-site fuel loading from dead organic debris was observed during preparation of this SEIR related to eucalyptus woodlands and associated ladder fuels. The resultant fuel loading on the Project Site increases the risk of significant loss, injury, or death involving wildland fires resulting in a potentially significant impact.

The City Zoning Ordinance, as discussed in **Section 4.7.2.3**, has regulations set forth for new developments and existing buildings in Very High Fire Hazard Severity Zones. These regulations include a buffer zone that must be 100 by 30 feet, building standards for reducing fire risk (e.g., slanted roofs to prevent vegetation debris accumulation and fireproofing), and vegetation management for reducing fuel loads, specifically referring to City Resolution 192-95. Resolution 192-95 details specific vegetation management standards, including ornament planting with low-risk fire plants, fuel reduction measures, disposal requirements for vegetation, and more. Such landscaping and fuel management can help to mitigate fire risk. During implementation of the Modified Project, all regulations pertaining to developing and maintaining development in a Very High Fire Hazard Severity Zone would be adhered to. Furthermore, fuel reduction measures would be included in the Open Space Plan required by **Mitigation Measure 4.3-13**. When fuel loading from dead and dying trees are managed as part of a plan and not allowed to accumulate, fires risks are greatly reduced.

During construction, there would be a potential to increase fire risk due to the use of machinery in areas with dry vegetation. To reduce this potential risk, **Mitigation Measure 4.7-2** would reduce construction-related wildfire impacts through incorporating methods to reduce fire ignition due to sparks

generated from equipment. Additionally, **Mitigation Measure 4.7-3** would require that, in the event of a wildfire on the Project Site, a wildfire emergency response plan (WERP) be implemented. The WERP would include pre- and post-wildfire actions, such as minimizing impacts from fire suppression activities and mitigating impending threats to safety and property. This impact would be less than significant after mitigation.

Off-Site Infrastructure

During construction there would be a potential to increase fire risk due to the use of machinery in areas with dry vegetation. To reduce this potential risk, **Mitigation Measure 4.7-2** would reduce construction-related wildfire impacts to less-than-significant levels by incorporating methods to reduce fire ignition due to sparks generated from equipment.

During operations, the off-site infrastructure would be located underground and would only require occasional maintenance. Therefore, this would not be a significant source of potential fire risk because of the lack of exposure to potential fuel sources. This impact would be less than significant.

IMPACT 4.7.6	DUE TO SLOPE, PREVAILING WINDS, AND OTHER FACTORS, EXACERBATE WILDFIRE RISKS, AND THEREBY EXPOSE PROJECT OCCUPANTS TO POLLUTANT CONCENTRATIONS FROM A WILDFIRE OR THE UNCONTROLLED SPREAD OF A WILDFIRE
Significance Before Mitigation	Significant
Mitigation Measures	Modified Project Mitigation: MM 4.7-1; MM 4.3-13
Significance After Mitigation	Less Than Significant
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

As discussed in **Section 4.7.3.3**, the Project Site is characterized by several vegetation types, including highly flammable eucalyptus forests, steep slopes, moderate temperatures, mean relative humidity between 60 and 80 percent, summers with low precipitation, and moderate wind speeds. In addition, occasional strong northeasterly winds that are dry and hot occur in summer and fall. These “Diablo Winds” can especially increase wildfire risk when combined with steep slopes, dry summers, and desiccated vegetation. As seen in **Figure 4.7-2** and discussed in **Impact 4.7.6**, the entire San Pablo Peninsula is designated a Very High Fire Hazard Severity Zone. This means that a number of factors, such as terrain and weather, make the peninsula, including the Project Site, highly susceptible to fire hazards. The Very High Fire Hazard Severity Zone in combination with the possible Diablo Winds could create a wildfire with rapid growth. In addition, the residents, workers, and visitors of the Project Site would be vulnerable to smoke/ash from wildfires on the Project Site. By locating the Modified Project in a Very High Fire Hazard Severity Zone, the potential to increase the risk of wildfire, and the potential to increase the risk of exposing residents, employees, and visitors to that increased risk exists. This would be a potentially significant impact.

The Modified Project would not alter the Project Site's slope in such a way that would exacerbate wildfire risk. As stated in **Section 4.6**, any cuts into hillslopes would be approved by a City Building Official before a grading permit would be granted. Per the City's Excavation, Grading, and Earthwork Construction Ordinance, fill would not create an exposed surface steeper than a horizontal to vertical ratio of two to one and would not be placed on a cut or natural slope steeper than a horizontal to vertical ratio of three to one. In addition, the Project Site's buildings would not create wind tunnels or otherwise accelerate strong winds.

In the open space areas of the Project Site, **Mitigation Measure 4.3-13** would require implementation of an active vegetation management plan to reduce fuel-loading in order to minimize the probability of an uncontrollable fire occurring. This vegetation management plan would assess and identify methods for wildfire prevention in these open space areas while also maintaining an aesthetically pleasing natural landscape. The vegetation management plan would ensure that fuel levels would be reduced in order to minimize the probability of an uncontrollable fire occurring. Implementation of **Mitigation Measure 4.3-13** would reduce these impacts in the open space areas to a less-than-significant level.

In the development areas on the Project Site, the Modified Project would adhere to City Council Resolution 192-95, Fire Hazard Reduction Vegetation Management Standards (**Appendix S**), to reduce fire hazards. The Resolution requires property owners to be active in fire prevention management. This includes but is not limited to fire safety friendly ornamental landscaping; fuel breaks adjacent to structures, roads and the property boundary; and eliminating nuisances (e.g., garbage on the property; for a complete list, see **Appendix S**). Conformance with these requirements would reduce the potential impacts of a wildfire growing uncontrollably in the developed areas to a less-than-significant level. In addition, by developing areas, the Modified Project would decrease the fuel onsite that could lead to fires. The Modified Project's development would meet the City's fire codes and the Modified Project would also add a fire station and new water infrastructure (including fire hydrants) that would result in better on-site firefighting abilities and quicker response time.

Although the Modified Project with mitigation would not exacerbate indirect wildfire risk, smoke inhalation during a wildfire could be potentially harmful. However, the Modified Project would include the California heating, ventilation, and air conditioning filters that are required to meet a minimum MERV 6 efficiency requirement. **Mitigation Measure 4.7-1** requires the Modified Project to develop an Emergency Response Plan that would the requirement to keep certain emergency supplies onsite, including high-efficiency particulate air (HEPA) masks to minimize excessive smoke inhalation from a wildfire. Additionally, residents and visitors to the Project Site could be evacuated from the area pursuant to the Emergency Response Plan identified in **Mitigation Measure 4.7-1** which may reduce the likelihood of smoke inhalation. This impact would be less than significant with mitigation.

IMPACT 4.7.7	REQUIRE THE INSTALLATION OR MAINTENANCE OF ASSOCIATED INFRASTRUCTURE (SUCH AS ROADS, FUEL BREAKS, EMERGENCY WATER SOURCES, POWER LINES, OR OTHER UTILITIES) THAT MAY EXACERBATE FIRE RISK OR THAT MAY RESULT IN TEMPORARY OR ONGOING IMPACTS TO THE ENVIRONMENT
Significance Before Mitigation	Potentially Significant
Mitigation Measures	Modified Project Mitigation: MM 4.7-2; MM 4.3-13
Significance After Mitigation	Less Than Significant
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

As discussed in **Section 3.0**, the Modified Project would include on- and off-site infrastructure improvements, such as widening Stenmark Drive and installing potable water mains, a wastewater collection system, and underground power lines, in combination with using existing infrastructure. During infrastructure construction, construction equipment could temporarily increase fire risk, resulting in a potentially significant impact. Implementation of **Mitigation Measure 4.7-2** would reduce the probability of equipment accidentally igniting a fire during construction by requiring spark-inducing equipment to have fully functioning spark arresters and requiring that vegetation be cleared before spark-inducing equipment is used.

With the exception of power lines and gas lines, operation and maintenance of infrastructure would have low impacts to wildfire risk, because they would not be combustible or induce sparks. Power lines and gas lines would be located underground, as required by the City and PG&E which reduces the likelihood that these lines would start a fire to a very low level. All infrastructure would be located within roadways and would be built according to applicable federal and State regulations for underground electrical facilities and gas lines. Furthermore, new and existing infrastructure would be properly maintained to reduce fire risk. In the open space areas of the Project Site, **Mitigation Measure 4.3-13** would require a vegetation management plan to ensure that fuel levels remain low and thereby reduce the probability of igniting a fire. In the developed areas of the Project Site, the Modified Project would adhere to City Council Resolution 192-95 (**Appendix S**) for vegetation management standards, as discussed in **Impact 4.7.6**, to reduce fuel levels. These measures would reduce this impact to a less-than-significant level.

IMPACT 4.7.8	EXPOSE PEOPLE OR STRUCTURES TO SIGNIFICANT RISKS, INCLUDING DOWNSLOPE OR DOWNSTREAM FLOODING OR LANDSLIDES, AS A RESULT OF RUNOFF, POST-FIRE SLOPE INSTABILITY, OR DRAINAGE CHANGES
Significance Before Mitigation	Potentially Significant
Mitigation Measures	Modified Project Mitigation: MM 4.7-1; MM 4.7-3
Significance After Mitigation	Less Than Significant
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

Onsite

After a wildfire, the environment would be changed, most prominently vegetation would be burned or incinerated. With vegetation removed, soil retention would be reduced and, in general, the ground would be unable to absorb water as readily. These effects could contribute to several environmental events. For example, without vegetation to hold the soil in place, sediment would be washed downhill during precipitation events. This sediment would collect in channels and cause debris flows, a type of landslide. Other events that could occur due to a loss of vegetation include mudflows and flash floods (National Oceanic and Atmospheric Administration, 2015). The Project Site has no flood risk due to post-fire drainage changes because Modified Project would be designed to continue to direct stormwater to the Bay. The Project Site has varying degrees of susceptibility to landslides, with the upland areas having the greatest potential for landslides due to post-fire slope instability. Although the General Plan designates the Project Site as an area not underlain by landslide deposits or bedrock units susceptible to landslides, the loss of vegetation due to a wildfire could possibly increase the potential for a landslide on the Project Site.

Landslides and other wildfire-induced hazards could be very dangerous to public health and cause substantial property damage. This would be a potentially significant impact.

Mitigation Measure 4.7-3 would require that, in the event of a wildfire, on the Project Site, a WERP be implemented. Before implementation of the Modified Project, qualified professionals would prepare the WERP in coordination with the Richmond Fire Department. The WERP would include pre- and post-wildfire actions, such as minimizing impacts from fire suppression activities and mitigating impending threats to safety and property. Furthermore, the WERP would specifically include an action to develop a long-term recovery and restoration plan to remediate the burned areas, and thus reduce potential future hazards to the public and property. In addition, implementation of **Mitigation Measure 4.7-1** would reduce the initial adverse safety risks from wildfire environmental changes by ensuring safe evacuation from affected areas. Implementation of **Mitigation Measures 4.7.1** and **4.7-3** would reduce the impact to a less-than-significant level.

Off-Site Infrastructure Improvements

Off-Site infrastructure would be primarily located underground and would not be structures; therefore, off-site infrastructure would not result in the exposure of people or structures to adverse indirect effects of wildfires. Only Stenmark Drive would potentially be exposed to such effects if they were to occur. There is no risk from flooding as a result of runoff, post-fire instability, or post-fire drainage changes because the Modified Project would be designed to continue to direct stormwater to the Bay and as described in **Section 3.0**, surface runoff would be minimized. There is a small risk of landslides as a result of post-fire slope instability. This risk would be mitigated through Implementation of **Mitigation Measure 4.7-3**, which would include requirements to manage post-fire slope instability through measures such as hydroseeding and revegetation. With **Mitigation Measure 4.7-3**, impacts would be reduced to less-than-significant levels.

IMPACT 4.7.9	CREATE A SIGNIFICANT HAZARD TO THE PROJECT THROUGH REASONABLY FORESEEABLE UPSET AND ACCIDENT CONDITIONS INVOLVING THE RELEASE OF HAZARDOUS MATERIALS INTO THE ENVIRONMENT FROM OFF-SITE SOURCES
Significance Before Mitigation	Less Than Significant
Mitigation Measures	None Required
Significance After Mitigation	Not Applicable
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

As discussed in **Section 4.7.3.2**, the Project Site is located in close proximity to the Chevron®-Richmond Refinery that produces, stores, and transports hazardous materials onsite. Hazardous materials of concern stored at the refinery include anhydrous NH₃, flammables, and petroleum. The 2007 Marine Research Specialists (MRS) study used in the 2011 FEIR analysis (Appendix M of the 2011 FEIR) modeled three different release scenarios. In the most severe scenario where active safeguards or mitigations were not used in the modeling, both 150 ppm and 350 ppm of airborne NH₃ reached beyond the Project Site. However, the 2007 MRS found that the topography of Potrero Ridge, which separates the Project Site from the Chevron®-Richmond Refinery, creates an impediment for potential NH₃ releases reaching the Project Site. The 2007 study cites the following factors that would affect the dispersion of an NH₃ vapor cloud.

- The Potrero Ridge increases the actual travel distance between the storage vessels and Project Site by about 100 feet (from a linear distance of about 4,590 feet to 4,690 feet).
- The topographic barrier would preclude NH₃ vapor cloud advection over the ridge during periods with extremely low wind speeds or inversion heights below approximately 350 feet.
- The ridge would increase turbulence and vapor cloud diffusion as the wind travels over the terrain.
- The ridge would create a turbulent vortex on the lee side of the terrain, thus further enhancing vertical diffusion within the vapor cloud.
- Prevailing winds blow in the direction of the Project Site from the Chevron®-Richmond Refinery approximately 16 percent of the time.

Furthermore, the probability of the accidental NH₃ release from the Chevron®-Richmond Refinery was found to be very low given the active mitigation measures, technical safe guards, and environmental conditions at the time.

However, since the 2007 study was completed, the Chevron®-Richmond Refinery has initiated a Modernization Project that includes updates to its facilities. These updates are predicted to increase the NH₃ inventory by 0.08 percent from the pre-project baseline of the refinery, but the new facilities would also enhance safety through the installation of new pipelines to transmit NH₃ within the refinery. As discussed in **Section 4.7.3.2**, the Modernization Project EIR determined that the Modernization Project

would not increase the risk to the general public related to an NH₃ release over pre-project conditions. Given the very low probability of an accidental NH₃ release from the Chevron®-Richmond Refinery, the active safeguards currently in place, and the environmental setting discussed above, impacts to the Project Site would be less than significant.

4.7.5.5. Cumulative Impacts

IMPACT 4.7.10	CUMULATIVE HAZARDS, HAZARDOUS MATERIAL, AND WILDFIRE IMPACTS
Significance Before Mitigation	Potentially Significant
Mitigation Measures	Modified Project Mitigation: MM 4.7-1; MM 4.7-2; MM 4.7-3; 4.7-4; MM 4.3-13
Significance After Mitigation	Less Than Significant
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

When assessing the cumulative impacts concerning hazardous materials, the Project Site and immediate vicinity is the geographical range utilized. During operations, the uses proposed as a part of the Modified Project would not require hazardous material use, transportation, or disposal, and therefore would result in little risk to the public. The cumulative projects outlined in **Table 5-1** are primarily similar non-industrial developments that would also not require hazardous material use, transportation, or disposal. Both the Modified Project and the cumulative projects occurring within the vicinity of the Modified Project would be required to follow the federal, State, and local laws and regulations presented in **Section 4.7.2**. Even though remediation must adhere to RWQCB's remediation requirements, **Mitigation Measure 4.7-4** would ensure that this occurs by requiring the Modified Project to adhere to the RWQCB's requirements when remediating the Project Site. This would further reduce the potential of a cumulative impact occurring. Therefore, cumulative impacts with regards to the routine use, transportation, or disposal of hazardous materials would be considered less than significant.

After the remediation of the Project Site as required by the RWQCB Order No. R2-2011-0087, the potential for accidental releases of hazardous materials at the Project Site would be very low because no contamination potentially harmful to the environment or public would exist or be accessible and because no large quantities of hazardous materials would require transportation or storage during the operations of the Modified Project. As discussed above, the majority of the cumulative projects outlined in **Table 5-1** are non-industrial and therefore would not require hazardous material usage. Consequently, the potential for accidental releases of the large quantities of hazardous materials hazardous materials from these cumulative projects would not be high. Furthermore, the Modified Project and cumulative projects would be required to follow applicable federal, State, and local regulations, and this would reduce the potential for accidental releases of hazardous materials. Therefore, this cumulative impact would be less than significant.

As discussed in this section, the Modified Project was found to have no impact on schools and airports related to hazardous materials. Therefore, the Modified Project would not contribute to a cumulative impact in combination with the identified cumulative projects.

Cortese List sites exist on the Project Site and would be remediated according to RWQCB Order No. R2-2011-0087. Therefore, these sites would not create a significant hazard to the public or environment in the future. Cortese List searches would be required for development of the cumulative projects identified in **Table 5-1** in order to assess the records for those sites. Should Cortese List records be found for those project sites that are considered significant, the cumulative projects would be required to comply with regulations and implement mitigation. Therefore, the Modified Project in combination with cumulative project sites would not create a significant impact with regards to Cortese List records. This cumulative impact would be less than significant.

Implementation of **Mitigation Measure 4.7-1** would ensure a thorough emergency response and safe evacuation routes from the Project Site in the event of a hazard. No other current or future projects were identified on the San Pablo Peninsula aside from the Chevron® Modernization Project. The Modernization Project is anticipated to add an additional 29 employees, which would not be a significant increase in the Chevron® workforce or the resulting volume of traffic created from a potential evacuation (City of Richmond, 2014). Furthermore, as discussed with **Impact 4.7.5**, Chevron's® current evacuation routes are not likely to utilize Stenmark Drive. Therefore, no cumulative impact would occur as a result of the Modified Project in combination with the Chevron® Modernization Project.

The entire San Pablo Peninsula is designated as a Very High Fire Severity Zone by the City. Currently, no other projects are being implemented or planned for the San Pablo Peninsula with the exception of the Chevron® Modernization Project. The Chevron® Modernization Project EIR determined that the Modernization Project's cumulative impact was limited primarily to the Chevron® property boundaries and with mitigation would be less than significant. The Modified Project is a residential and commercial development that would not involve high fire risk activities on the Chevron® property boundary nor would it interfere with Chevron's® on-site fire management. Therefore, the Modified Project would not significantly contribute to Chevron's® onsite cumulative fire risk impact.

The Chevron® facility has implemented mitigation measures, including extensive vegetation management and training of on-site personnel to handle fire incidents. Implementation of **Mitigation Measures 4.7.1** through **4.7.3** and **Mitigation Measure 4.3-13** would reduce the Modified Project's potential for starting and exacerbating wildfires due to excessive fuels in open-space areas. These mitigation measures would also ensure a thorough emergency response, safe evacuation routes, and the competent management of direct (e.g., smoke inhalation) and indirect effects associated with a wildfire (e.g., erosion). Because, as discussed above, the Chevron® property impacts are contained to the Chevron® property, evacuation from the Chevron® property would not result in a substantive amount of additional evacuation traffic, and evacuating routes from the Chevron® property would likely use different routes than the Modified Project. The Modified Project, in combination with the Chevron® Modernization Project, would not result in a significant cumulative impact related to fire hazards.

4.7.6 MITIGATION MEASURES

This section includes mitigation measures identified to reduce environmental impacts of the Modified Project. Mitigation measures that were identified in the 2011 FEIR have been identified again as appropriate; however, review of the mitigation measures identified in the 2011 FEIR determined that some measures required revisions or were not applicable to the Modified Project. **Appendix K** provides a summary of whether each mitigation measure from the 2011 FEIR was revised, deleted, or kept as is and the reasoning for that determination.

MM 4.7-1 Emergency Response Plan: Prior to the issuance of the first building permit, a site-specific ERP will be developed under the Modified Project to ensure safe evacuation of the Project Site during an emergency in a manner that does not interfere with existing evacuation plans and procedures for sheltering in place. The ERP shall identify protocols for evacuation and recommendations regarding emergency supply kits and HEPA filter masks that can be accessed in the case of an earthquake, wildfire, and chemical release. The ERP shall require that the Project Site include a warning system and identify the location of warning devices, such as sirens, on the Project Site and describe how the warning system would be integrated with the Contra Costa Health Services (CCHS) and Community Warning System (CWS). The ERP also shall identify the locations of appropriate refuge areas and emergency evacuation routes, and will address the need for one or more places where people can shelter-in-place as a contingency to evacuation. The ERP shall require community informational sessions to inform citizens of the evacuation procedures, refuge locations, and shelter-in-place procedures and how to appropriately respond during an emergency. Furthermore, signage will be posted on the Project Site that will inform residents and visitors of the location of refuge areas and places to shelter in place. The ERP also shall require the Project proponent to coordinate its emergency plans with CCHS to ensure an adequate level of emergency preparedness for Project Site visitors. Additionally, the ERP shall require the Project proponent to coordinate with the Water Emergency Transportation Authority (WETA) to provide emergency response planning and coordinated water-escape services.

MM 4.7-2 Fire Prevention during Construction: Any construction equipment that normally includes a spark arrester shall be equipped with an arrester in good working order. This includes, but is not limited to, vehicles, heavy equipment, and chainsaws. During construction, all construction personnel shall have a cell phone or radio system in order to activate 911 if required, a handheld pressurized horn that can be utilized to alert others during an emergency, and be trained in how to properly inform 911 of their work location. All construction vehicles shall be equipped with a 4/ABC or larger fire extinguisher. Every work area shall have one water type fire extinguisher and one round-tip shovel available within 10 feet. Staging areas and areas slated for development using spark-producing equipment shall be cleared of dried vegetation or other materials that could serve as fire fuel. To the extent feasible, the contractor shall keep these areas clear of combustible materials in order to maintain a firebreak. Furthermore, all vegetation mowing activities shall be completed prior to noon. During hot work (e.g. welding), a fire watch shall be utilized 30 minutes during and after the hot work is completed.

MM 4.7-3 Wildfire Emergency Response Plan: Prior to issuance of the first building permit, a site-specific WERP shall be developed by qualified personnel with expertise in wildfire management and in coordination with the Richmond Fire Department. This WERP shall have pre- and post-wildfire response measures. The pre-wildfire response measures shall include actions to reduce damage to property

anticipated from wildfire events and ensure evacuation routes are kept clear (e.g. sandbags to mitigate possible landslide and flood damage). The post-wildfire response measures will include fire suppression damage repair and emergency stabilization measures. Fire suppression damage repair could include immediate actions to minimize soil erosion impacts resulting from fire suppression activities that can occur before the wildfire is completely contained. Emergency stabilization could include identifying impending threats to safety and property and then actions immediately implemented to mitigate these identified threats. These actions could include the installation of water run-off and erosion control structures, removal of burnt vegetation, and installation of warning signs.

The WERP will also include standards for a five-year long-term recovery and restoration plan to rehabilitate any burned areas. These measures could include restoring burned habitat, reforestation, monitoring fire effects, and treating noxious weed infestations. This would be prepared by qualified personnel with burned area restoration expertise and in coordination with and to the approval of the Richmond Fire Department. Prior to the issuance of the first building permit, the WERP shall be submitted to the Richmond Fire Department for review and approval.

MM 4.7-4 Compliance with Regulatory Oversight During Remediation: Cleanup of environmental contamination shall be conducted under the oversight of, and in direct coordination with, the Regional Water Quality Control Board. Remediation shall be completed to cleanup standards established by the Regional Board as protective of human health and the environment. Cleanup standards will likely vary for each portion of the site, based upon the contaminants detected, the planned use of the site, technical feasibility, and any other factors deemed relevant by the Water Board. Any and all development shall be consistent with deed restrictions or other land use covenants that the Regional Board deems adequate to protect human health and the environment.

Construction of the Bay Trail

This section includes mitigation measures applicable to the construction of the Bay Trail. The following mitigation measures are incorporated by reference from the San Francisco Bay Trail at Point Molate IS/MND, as described in **Section 1.4.4**. For ease of reference, the following mitigation measures are numbered the same as found in the Bay Trail IS/MND.

- | | |
|-------|---|
| HAZ-1 | Exclusionary fencing shall be installed to keep users from accessing abandoned buildings and other structures that pose a physical hazard. Fencing shall also be installed in areas where hazardous building materials may be present and where contaminated soils occur near the proposed alignment and would not be capped. This may include areas along the eastern edge of Burma Road, the perimeter of buildings at the drum lot, and the inside perimeter of the drum lot. |
| HAZ-2 | The final Plan, Specification and Estimate (PS&E) for the Project shall identify areas where arsenic shall be addressed and require the contractor to comply with the NFD SGWMP, the project-specific soil management plan, and air monitoring plan. The contractor shall be required to prepare and Health and Safety Plan. Implementation of the project-specific soil management plan and air monitoring plan, and preparation and implementation of the Health and Safety Plan shall be conducted with oversight by a |

Certified Industrial Hygienist. During construction, areas of known elevated arsenic shall be either capped in place, relocated and capped, or access discouraged to prohibit users. Areas where soils containing arsenic above background occur beneath the footprint of the trail shall be covered with a minimum of 1-foot of clean fill material. Soils shall not be transported between City and Chevron properties (i.e. between Segment A and Segment B). The Lead Agency shall document that the City has informed/contacted the RWQCB two weeks prior to construction, as required by the SGWMP.

HAZ-4 The contractor shall adhere to and incorporate the relevant conditions contained in the 2012 NFD SGWMP. Prior to Project construction, a project specific soils management plan and or equivalent health and safety plan shall be prepared by the contractor under the direction of a certified industrial hygienist, and reviewed by the City of Richmond for consistency with existing contractual requirements.

4.8 HYDROLOGY AND WATER QUALITY

4.8.1 INTRODUCTION

This section provides a description of hydrology and water quality conditions in the Point Molate Mixed-Use Development Project (Modified Project) area and describes the changes to those conditions that would result from implementation of the Modified Project. Following an overview of the relevant regulatory setting in **Section 4.8.2** and the hydrology and water quality resource setting in **Section 4.8.3**, project-related impacts and mitigation measures are presented in **Section 4.8.5** and **Section 4.8.6**, respectively. The hydrology and water quality impacts associated with the Casino Project and analyzed as Alternative A in the *Final Environmental Impact Report for the Point Molate Mixed-Used Tribal Destination Resort and Casino Project* (2011 FEIR) are also summarized in **Section 4.8.4** and compared to the impacts of the Modified Project.

4.8.2 REGULATORY SETTING

4.8.2.1 Federal

Clean Water Act

The Clean Water Act (CWA), 33 U.S. Code (USC) §§ 1251-1376, as amended by the Water Quality Act of 1987, is the major federal legislation that governs water quality. The objective of the CWA is “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” The U.S. Environmental Protection Agency (USEPA) is charged with administering the CWA.

Section 404 of the CWA prohibits the discharge of dredged or fill material into waters of the U.S., including wetlands, without a permit from the U.S. Army Corps of Engineers (USACE). Section 401 of the CWA requires that USACE permit applicants also obtain state certification that the activity associated with the permit will comply with applicable state effluent limitations and water quality standards. Under the state Porter-Cologne Water Quality Control Act, the Regional Water Quality Control Boards (RWQCBs) may choose to issue Waste Discharge Requirements (WDRs) in conjunction with the water quality certification for the Modified Project.

U.S. Environmental Protection Agency

The USEPA is responsible for implementing federal laws designed to protect air, water, and land. While numerous federal environmental laws guide the activities of the USEPA, its primary mandate with respect to water quality is the CWA. The USEPA has developed national technology-based water quality standards, and states have also developed water quality standards in accordance with the CWA. The USEPA has authority to establish water quality standards if a state fails to do so. In the National Toxics Rule and the California Toxics Rule, the USEPA has established such standards for certain toxic pollutants applicable to California waters. These standards are used to determine the amount and the conditions under which pollutants can be discharged.

Beneficial Uses and Impaired Waterbodies

Sections 303 and 304 of the CWA outline provisions for the development of water quality standards, identification of impaired waterbodies, and guidelines for improving water quality throughout the nation.

States are required to designate beneficial uses for jurisdictional waters (regardless of existing quality). Section 303(d) of the CWA requires states to identify waterbodies within their planning jurisdiction that are impaired in such a manner that beneficial uses cannot be maintained. States are required to develop total maximum daily loads (TMDL), which are qualitative and quantitative measures designed to improve water quality to maintain designated beneficial uses. TMDLs establish limits for total pollution loading in waters that do not currently meet, or are not expected to meet, applicable water quality standards.

Water Quality Certification

Section 401 (Water Quality Certification) of the CWA requires states to comply with federal permitting and other sections of the CWA. Under Section 401, an applicant must verify that the permitted action would not impede the ability of the state (in which the project is located) to comply with other provisions of the CWA. Within California, Section 401 is the responsibility of the RWQCB.

National Pollutant Discharge Elimination System

Section 402 of the CWA establishes a national permitting system known as the National Pollutant Discharge Elimination System (NPDES), which regulates the discharge of pollutants into Waters of the United States (except for dredged or fill material, which is covered under Section 404 of the CWA). Project applicants that propose to discharge waste to Waters of the U.S. are required to obtain a NPDES permit. If issued, the permit contains a WDR, which includes limits on the concentrations of pollutants that can be discharged to surface waters, depending on the quality of the receiving water, to prevent degradation of water quality and protect beneficial uses. For federal projects, the USEPA is the permitting agency. For local projects in California, the USEPA has delegated control of the NPDES permitting program to the State Water Resources Control Board (SWRCB) and the nine RWQCBs. The San Francisco Bay RWQCB (SFBRWQCB) regulates water quality at the Project Site and in surrounding areas.

Under 40 Code of Federal Regulations (CFR) 131.6, each state must develop, adopt, and retain an antidegradation policy to protect the minimum level of surface water quality necessary to support existing uses. Each state must also develop procedures to implement the antidegradation policy through water quality management processes. Each state antidegradation policy shall include implementation methods consistent with the provisions outlined in 40 CFR 131.12. The antidegradation policy for California is outlined below in the **Section 4.8.2.2**.

Safe Drinking Water Act

Minimum national drinking water standards are established through the 1974 Safe Drinking Water Act (42 USC § 300f et seq.). Contaminants of concern (COC) relevant to domestic water supply are defined as those that pose a public health threat or that alter the aesthetic acceptability of the water. The USEPA regulates these types of COCs through the development of national primary Maximum Contaminant Levels (MCL) for drinking water. These legally enforceable standards apply to public water systems and are established to protect human health by limiting the levels of contaminants in drinking water. The USEPA also defines National Secondary Drinking Water Regulations (secondary standards) that are non-enforceable; second standards regulate contaminants that cause cosmetic or aesthetic effects.

Rivers and Harbors Act

Section 10 of the Rivers and Harbors Act of 1899 prohibits work affecting the course, location, conditions, or capacity of navigable Waters of the U.S. without a permit from USACE. Examples of activities requiring a permit from USACE are the construction of any structure in or over any navigable water; excavation or deposition of materials in such waters; and various types of work performed in such waters, including placement of fill and stream channelization.

Federal Emergency Management Agency

The Federal Emergency Management Agency (FEMA) is responsible for determining flood elevations and floodplain boundaries based on USACE studies, as well as distributing Flood Insurance Rate Maps (FIRM), which are used in the National Flood Insurance Program (NFIP). These maps identify the locations of special flood hazard areas, including 100-year floodplains. A 100-year flood event is defined as a flood event which would have a one in 100 chance of occurring each year.

Coastal Zone Management Act

The Coastal Zone Management Act (CZMA) was enacted by Congress in 1972 and is administered by the Office of Ocean and Coastal Resource Management of the National Oceanic and Atmospheric Administration. The overall program objectives of the CZMA are to “preserve, protect, develop, and where possible, to restore or enhance the resources of the nation's coastal zone.”

Under Section 307 of the CZMA, 16 USC § 1456, activities that may affect coastal uses or resources that are undertaken by federal agencies require a federal license or permit, or that receive federal funding must be consistent with the federally approved coastal management program of a state. The federally approved coastal management program for California consists of the California Coastal Act, the McAtteer-Petris Act, and the Suisun Marsh Protection Act.

The California Coastal Commission implements the California Coastal Act and the federal consistency provisions of the CZMA for activities affecting coastal resources outside of the Bay. The San Francisco Bay Conservation and Development Commission (BCDC) implements the McAtteer-Petris Act and the Suisun Marsh Preservation Act and performs federal consistency reviews for activities affecting the Bay, the delta, and the Bay shoreline.

4.8.2.2 State***Porter-Cologne Water Quality Control Act***

The Porter-Cologne Water Quality Control Act, Division 7 of the California Water Code, provides the basis for surface water and groundwater quality regulation within California and establishes the authority of the SWRCB and the nine RWQCBs. The SWRCB administers water rights, water pollution control, and water quality functions throughout California, while the RWQCBs conduct planning, permitting, and enforcement activities within designated regions. The Project Site is located along the northeastern edge of the Bay, under the jurisdiction of the SFBRWQCB.

The Porter-Cologne Water Quality Control Act requires the State of California, through the SWRCB and the RWQCBs, to designate beneficial uses of surface waters and groundwater, and specify water quality objectives designed to protect those uses. These water quality objectives are presented in the RWQCB Plans (Basin Plans).

Any action that may result in the discharge of pollutants that could affect the quality of the waters within the state must file a "Report of Waste Discharge" (RWD) with the RWQCB when applying for a state-administered NPDES permit. The RWQCB staff analyzes the RWD and characteristics of the proposed discharge and prepares a draft WDR, which contains operational requirements, contaminant limitations, and monitoring requirements. For example, publicly-owned treatment plants must acquire WDRs prior to discharging treated effluent to land.

SFRWQCB Antidegradation Policy

Basin Plans are developed and periodically reviewed to fulfill state requirements of the antidegradation policy of the CWA. These Plans designate beneficial uses within major rivers and groundwater basins in California, and establish water quality objectives within waters located in each region. The beneficial uses identified within each Basin Plan describe the qualities and services that are derived from a water body. In turn, water quality objectives are intended to protect and support the continued viability of beneficial uses. Implementation of Basin Plans occurs primarily through issuance of WDRs. Each Basin Plan provides a technical basis for determining WDRs and, when necessary, regulatory enforcement action.

Water Quality Control Plan for the San Francisco Region

The SFRWQCB is responsible for developing and implementing the San Francisco Bay Basin Plan, which documents how to implement applicable state and federal policies based on actual water quality conditions. The RWQCB also permits waste discharges and monitors pollutant effects.

On May 4, 2017, the RWQCB adopted the most recent revision of the San Francisco Bay Basin Plan, which the SWRCB and the Office of Administrative Law had previously adopted in 1995. The San Francisco Bay Basin Plan identifies beneficial uses of receiving waters, water quality objectives imposed to protect the designated beneficial uses, and strategies and schedules for achieving water quality objectives.

Section 303(c)(2)(B) of the CWA requires that all Basin Plans include water quality objectives governing approximately 65 of the 129 USEPA-listed pollutants. Water quality objectives are achieved primarily through the establishment and enforcement of WDRs for each wastewater discharger. State policy for water quality control in California is directed toward achieving the highest water quality consistent with maximum benefit to state residents. Therefore, all water resources must be protected from pollution and nuisances that may occur from waste discharges. Water quality standards and discharge limitations are established to protect beneficial uses of surface waters, groundwater, marshes, and mud flats.

Sustainable Groundwater Management Act

The Sustainable Groundwater Management Act (SGMA) of 2014 provides the State of California with a framework for sustainable groundwater management by requiring governments and water agencies of

priority groundwater basins to halt overdraft and balance levels of pumping and recharge. The SGMA requires the adoption of a Groundwater Sustainability Plan (GSP) for the most important groundwater basins in California, and empowers local agencies to form or join Groundwater Sustainability Agencies to draft GSPs for their respective groundwater basins. Under the SGMA, these basins should reach sustainability within 20 years of GSP implementation, which is calendar year 2040 for critically over-drafted basins, and 2042 for the remaining high and medium priority basins.

In early 2019, the East Bay Plain Subbasin, which includes the Project Site, was determined to be a medium priority subbasin. The East Bay Plain Subbasin stretches from the City of Richmond (City) south to Fremont along the plains of the East Bay. Groundwater impacts identified for the Subbasin include salt intrusion, subsidence, and water quality (Department of Water Resources, 2020). The East Bay Municipal Utility District (EBMUD) is currently developing the East Bay Plain Subbasin GSP.

Floodplain Management

Sections 65302, 65560, and 65800 of the California Government Code gives authority to local governments to adopt regulations for the protection of public health, safety, and general welfare, including protection against loss of property and life, due to flooding in compliance with the NFIP. The State of California Governor's Office of Planning and Research assists local governments with the development of general plan guidelines for the development of floodplain management policies and sample floodplain management municipal code ordinances.

Construction General Permit

The Construction General Permit¹, adopted by the SWRCB, regulates construction activities that include clearing, grading, and excavation resulting in soil disturbance of at least one acre of total land area. The Construction General Permit authorizes the discharge of stormwater to surface waters from construction activities, provided the discharge does not contain materials other than stormwater or authorized non-stormwater discharges. All discharges that contain a hazardous substance in excess of reportable quantities established at 40 CFR § 117.3 or 40 CFR § 302.4 are prohibited, unless a separate NPDES permit has been issued to regulate such discharges.

The Construction General Permit requires that all developers of land where construction activities will occur over more than 1 acre perform the following tasks.

- Complete a Risk Assessment to determine pollution prevention requirements pursuant to the three Risk Levels established in the Construction General Permit.
- Eliminate or reduce non-stormwater discharges to storm sewer systems and other Waters of the U.S.
- Develop and implement a Stormwater Pollution Prevention Plan (SWPPP), which specifies Best Management Practices (BMP) that will reduce pollution in stormwater discharges to the Best

¹ *General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities*, Order No. 2009-0009-DWQ, as amended by Order No. 2012-0006-DWQ, National Pollutant Discharge Elimination System No. CAS000002.

Available Technology Economically Achievable/Best Conventional Pollutant Control Technology standards.

- Perform inspections and maintenance of all BMPs.

To obtain coverage under the NPDES Construction General Permit, the Legally Responsible Person for applicable construction activities must electronically file all permit registration documents with the SWRCB prior to the start of construction, including the following.

- Notice of Intent (NOI)
- Risk Assessment
- Site Map
- SWPPP
- Annual Fee
- Signed Certification Statement

BMPs contained in SWPPPs are designed to minimize erosion during construction, stabilize construction areas, control sediment, control pollutants from construction materials, and address post-construction runoff quantity (volume) and quality (treatment). SWPPPs must also discuss inspection and maintenance of BMPs.

4.8.2.3 Local

San Francisco Bay Conservation and Development Commission

The BCDC was established as a California agency to accomplish two primary goals.

1. To prevent the unnecessary filling of the Bay
2. To increase public access to and along the Bay shoreline

The responsibility of the BCDC includes implementation of the San Francisco Bay Plan (Bay Plan) (BCDC, 2015a).

San Francisco Bay Plan

The McAteer-Petris Act directs the BCDC to carry out its regulatory process in accordance with Bay Plan policies and maps. The BCDC adopted the Bay Plan in 1968, which it forwarded to the California Legislature and Governor in 1969. Reflecting years of continuous study and public deliberation, the Bay Plan contains information that describes the values associated with the Bay and policies regarding future uses of the Bay and its shoreline, as well as maps that direct the protection and development of the Bay and its tributary waterways, marshes, managed wetlands, salt ponds, and shoreline in accordance with these policies.

The Bay Plan recognizes that the Bay is a single body of water, in which changes affecting one part may also affect other parts, and should be regarded as the most valuable natural asset of the entire Bay region. Central to this idea is that the Bay benefits not only the residents of the Bay Area, but the State of California and the nation as well. This regional perspective enables the Bay Plan to effectively protect and

enhance the Bay. Below are policies in the Bay Plan that are applicable to the development of the Project Site.²

Water Quality

1. Water pollution in the Bay should be prevented to the greatest extent feasible. Tidal marshes, tidal flats, and water surface area and volume in the Bay should be conserved and, whenever possible, restored and increased to protect and improve water quality. Fresh water inflow into the Bay should be maintained at a level adequate to protect Bay resources and beneficial uses.
2. Water quality in all parts of the Bay should be maintained at a level that will support and promote the beneficial uses of the Bay as identified in the San Francisco Bay Basin Plan.
3. New projects should be sited, designed, constructed, and maintained to prevent or, if prevention is infeasible, to minimize the discharge of pollutants into the Bay by:
 - A. controlling pollutant sources at the Project Site;
 - B. using construction materials that contain non-polluting materials; and
 - C. applying appropriate, accepted, and effective BMPs.
6. To protect the Bay and its tributaries from the water quality impacts of non-point source pollution, new development should be sited and designed consistent with standards in municipal stormwater permits and state and regional stormwater management guidelines where applicable, and with the protection of Bay resources. To offset impacts from increased impervious areas and land disturbances, vegetated swales, permeable pavement materials, existing tree and vegetation preservation, native vegetation plantings, and other appropriate measures should be evaluated and implemented as appropriate.
7. Whenever practicable, native vegetation buffer areas should be used as part of a project to control pollutants from entering the Bay, and vegetation should be substituted for rock riprap, concrete, or other hard surface shoreline and bank erosion control methods where appropriate and practicable.

Water Surface Area and Volume

1. The surface area of the Bay and the total volume of water should be kept as large as possible in order to maximize active oxygen interchange, vigorous circulation, and effective tidal action. Filling and diking that reduce surface area and water volume should therefore be allowed only for purposes providing substantial public benefits and only if there is no reasonable alternative.
2. Water circulation in the Bay should be maintained, and improved as much as possible. Any proposed fills, dikes, or piers should be thoroughly evaluated to determine their effects upon water circulation and then modified as necessary to improve circulation or at least to minimize any harmful effects.
3. Because further study is needed before any barrier proposal to improve water circulation can be considered acceptable, the Bay Plan does not include any barriers. Before any proposal for a barrier is adopted in the future, the Commission will be required to replan all of the affected shoreline and water area.

² The Bay Plan Policies are numbered to reflect the actual numbering in the Bay Plan.

Public Access

6. Public access should be sited, designed, managed, and maintained to avoid significant adverse impacts from sea level rise and shoreline flooding.

BCDC Authority

In conformity with the provisions and policies of both the McAteer-Petris Act and the Bay Plan, the BCDC implements its authority to issue or deny permits for proposed local projects within the area of its jurisdiction, which is defined as:

- the Bay itself (all areas that are subject to tidal action, including sloughs, from the south end of the Bay to the Golden Gate to the Sacramento River, as more specifically defined by the McAteer-Petris Act);
- a shoreline band of land extending inland for 100 feet from the shoreline of the Bay;
- salt ponds (as defined by the McAteer-Petris Act);
- managed wetlands (as defined by the McAteer-Petris Act); and
- certain waterways consisting of all areas that are subject to tidal action on named tributaries that flow into the Bay, as listed in the McAteer-Petris Act.

The jurisdiction of the BCDC over the Bay and certain named waterways extends to the mean high tide line in areas that do not contain tidal marsh and up to 5 feet above mean sea level in areas of tidal marsh. The BCDC requires permits for the following activities.

- Placement of solid material; building or repairing of docks, pile-supported, or cantilevered structures; disposal of material or mooring of a vessel for a long period in the Bay or in certain tributaries that flow into the Bay
- Dredging or extraction of material from the Bay bottom
- Substantial change of the use of any structure in the area
- Construction, remodeling, or repair of a structure
- Subdivision of property or grading of land

The BCDC uses the McAteer-Petris Act, the Bay Plan, its own regulations, and other plans specific to other areas of the Bay to formulate its decisions. BCDC policies also require sea level rise risk assessments to be conducted when planning shoreline areas or designing large shoreline projects within BCDC jurisdiction. Risk assessments should be prepared by a qualified engineer, and based on the estimated 100-year flood elevation, taking into account the best estimates of future sea level rise.

Since the publication of the Notice of Preparation (NOP), several Bay Plan policy amendments have been approved. These policy amendments will take effect by early 2020 depending on State and federal approval process timing.

On October 3, 2019, the BCDC approved the Fill for Habitat Bay Plan Amendment (BPA 1-17). This amendment takes into consideration climate change and its effect on rising sea levels. As a result of rising sea levels, habitats will experience more frequent flooding and over time that could threaten their survival. The Fill for Habitat Bay Plan Amendment would include several actions, such as placing more

sediment in restoration sites, building higher elevation habitats, or providing hard surfaces in areas needed by Bay species (BCDC, 2015a).

On October 17, 2019, the BCDC approved the Environmental Justice and Social Equity Bay Plan Amendment (BPA 2-17). This amendment takes into consideration climate change and its effect on rising sea levels. As a result of rising sea levels, low-income communities and those underrepresented or marginalized may have more difficulty preparing for, responding to, or recovering from a flood. Many of these communities are disproportionately exposed to hazardous or toxic substances, which may be exacerbated if contaminants are mobilized by flood waters. As a result of the Environmental Justice and Social Equity Bay Plan Amendment, new policies will include further foresight and inclusiveness when it comes to at risk communities. The BCDC will evaluate proposed projects differently as a result of the new policy change, including but not limited to, requiring meaningful community involvement for certain projects, requiring that disproportionate impacts are identified and addressed, and using inclusive design principles in the evaluation of public access projects (BCDC, 2015b).

Contra Costa Clean Water Program and Municipal Regional Permit

The Contra Costa Clean Water Program has been established as the local entity responsible for implementing compliance with the federal CWA to control stormwater pollution. It is comprised of Contra Costa County (County), 19 incorporated cities, and the Contra Costa County Flood Control and Water Conservation District. The program is conducted in compliance with the NPDES Municipal Regional Permit (MRP) issued by the SFB RWQCB for municipal separate storm sewer systems (MS4), which contains a comprehensive plan to reduce the discharge of pollutants to the “maximum extent practicable” and mandates that participating municipalities implement an approved stormwater management plan. The program incorporates BMPs that include construction controls (such as a model grading ordinance), legal and regulatory approaches (such as stormwater ordinances), public education and industrial outreach (to encourage the reduction of pollutants at various sources), inspection activities, wet-weather monitoring, and special studies (Contra Costa Clean Water Program, 2019).

The most recent MRP was adopted in November 2015 (Order R2-2015-0049, NPDES Permit No. CAS612008). The MRP governs discharges from municipal storm drains operated by 76 local government entities, including the City.

C.3 Permit Requirements

The MRP includes provision C.3, which governs storm drain systems and regulates post-construction stormwater runoff. The provision requires new development and redevelopment projects to incorporate treatment measures and other appropriate source control and site design features to reduce the pollutant load in stormwater discharges and to manage runoff flows. “Redevelopment” is defined as a project on a previously developed site that results in the addition or replacement of a minimum of 10,000 square feet of impervious surface. Provision C.3 requires careful documentation of pervious and impervious areas in the planned project, drainage from each of these areas, and locations, sizes, and types of proposed low-impact development (LID) features, stormwater treatment, and flow-control facilities.

LID strategies could include optimizing site layout to preserve natural drainage features and minimize impervious surfaces; using pervious surfaces that retain rainfall; dispersing runoff to adjacent pervious

surfaces; storing runoff for later use; or draining impervious surfaces to engineered integrated management practices, including bio-retention facilities, flow-through planters, or dry wells.

Dewatering Permit

Construction activities such as excavation and trenching in areas with shallow groundwater may require dewatering, which would be subject to the RWQCB construction dewatering permit requirements. Dewatering operations are regulated under state requirements for stormwater pollution prevention and control. Discharge of non-stormwater from a trench or excavation that contains sediments or other pollutants to sanitary sewer, storm drain systems, creek beds (even if dry), or receiving waters is prohibited. Discharge of water resulting from dewatering operations would require an NPDES permit, or a waiver (exemption) from the RWQCB, that would establish discharge limitations for specific chemicals (if they occur in the dewatering flows).

Richmond General Plan 2030

The City's General Plan 2030 (General Plan) identifies multiple policies with regard to hydrology and water quality. A summary of the consistency of the Modified Project with the General Plan is included as **Appendix L**.

GOAL ED1³ **An Appealing Place to Live and Work.** Foster neighborhoods, commercial and industrial areas, and public spaces that are safe and welcoming environments to live, work, and visit. Effective public safety services, neighborhood revitalization efforts, opportunities for cultural and recreational activities, affordable housing, socially and environmentally responsible businesses, and a diverse and expanded tax base will contribute to this environment.

Policy ED1.3 **Toxic and Contaminated Sites.** Continue to work with the appropriate local, state, and federal agencies to promote the cleanup and reuse of contaminated sites to protect human and environmental health. Work with property owners and regional agencies to prevent, reduce, or eliminate soil and water contamination from industrial operations, the Port and other activities that use, produce, or dispose of hazardous or toxic substances. Implement appropriate mitigation measures and cleanup of sites that are known to contain toxic materials as a condition of reuse. Support the remediation and reuse of large, disturbed sites, such as the Winehaven complex at Point Molate and the Terminal 4 site at Point San Pablo, into mixed-use centers that provide the maximum benefit to the community without compromising the integrity of the surrounding natural areas.

³ Goal ED1 does not specifically address hydrology and water quality. However, Policy ED1.3, which concerns the elimination of soil and water contamination, is included in the General Plan to support Goal ED1. Therefore, Goal ED1 is included in this SEIR to provide regulatory context for Policy ED1.3.

- GOAL LU6** **High-Quality and Sustainable Development.** Maintain a high standard of design, planning, and construction of new and renovated public and private facilities, infrastructure, and services. Continue committing to a comprehensive planning approach that supports a sustainable and healthy community and reduces impacts on the natural environment.
- Provide new development near transit and in areas with existing transportation infrastructure. Activate public areas and reduce the need for residents and employees to travel by automobile to access daily goods by promoting the location of housing, jobs, and recreation uses close to transit lines, bicycle routes, and pedestrian improvements. In support of a walkable and vibrant community, develop complete mixed-use streets that are safe for pedestrians, bicyclists, and all modes of travel.
- Policy LU6.4** **Long-Term Environmental Sustainability.** Promote development standards and land use patterns that encourage long-term sustainability. Support the restoration of natural features such as creeks and wetlands in urban areas and existing neighborhoods as a means of connecting residents with nature and reversing damage to natural systems. Promote landscaping that incorporates native, drought-tolerant plants and sustainable maintenance practices and standards. Provide trees on residential and mixed-use streets and green infrastructure to reduce stormwater runoff. Encourage compact development close to amenities and green buildings to reduce energy use.
- GOAL CR5** **Sustainable and Green Practices.** To create sustainable and clean circulation options, encourage the use of low-impact alternative fuels and new technologies and implement transportation demand management programs. Encourage measures to treat and retain stormwater in the design of pedestrian and parking amenities.
- Policy CR5.3** **Green Streets.** Promote the development of street design elements that incorporate natural stormwater drainage and landscaping in new and retrofitted streets. (See also: CR5.F; HW4.L; EC4.F.)
- GOAL CF3** **Green and Sustainable Standards and Practices.** Regularly upgrade existing community facilities and infrastructure, and set standards for new improvements that support long-term sustainability and environmental protection.
- Policy CF3.2** **Green Infrastructure and Landscape.** Promote ecologically-sensitive approaches in landscaping, stormwater drainage, groundwater recharge, and flood control. Work with EBMUD and local nurseries to promote “waterwise” landscaping. Continue to gather and distribute new information that will assist residents and businesses to establish planted areas that require fewer chemicals or pesticides and help to filter stormwater and recharge groundwater aquifers.

- GOAL CN3** **Improved Water Quality.** Pursue a multi-jurisdictional approach to protecting, maintaining, and improving water quality and the overall health of the watershed. A comprehensive, integrated approach will ensure compliance with federal and State standards, and address a range of interconnected priorities including: water quality and runoff; stormwater capture, storage, and flood management techniques that focus on natural drainage; natural filtration and groundwater recharge through green infrastructure and habitat restoration; and water recycling and conservation.
- Policy CN3.1** **Stormwater Management.** Develop strategies to promote stormwater management techniques that minimize surface water runoff in public and private developments. Utilize LID techniques to best manage stormwater through conservation, on-site filtration, and water recycling.
- Policy CN3.2** **Water Quality.** Work with public and private property owners to reduce stormwater runoff in urban areas to protect water quality in creeks, marshlands, water bodies, and bays. Promote the use of sustainable and green infrastructure design, construction, and maintenance techniques on public and private lands to protect natural resources. Incorporate integrated watershed management techniques and to improve surface water and groundwater quality, protect habitat and improve public health by coordinating infrastructure and neighborhood planning and establishing best practices for reducing non-point runoff. (See also: HW9.3.)
- Policy CN3.3** **Flood Management.** Minimize the flood hazard risks to people, property, and the environment. Address potential damage from a 100-year flood, tsunami, sea level rise, and seiche, and implement and maintain flood management measures in all creeks and watersheds.
- GOAL EC6** **Climate-Resilient Communities.** While the impacts of climate change on local communities are uncertain, to the extent possible, prepare to respond to and protect residents and businesses from increased risks of natural disasters such as flooding or drought.
- Policy EC6.3** **Adapting to Climate Change.** Prepare for and adapt to future impacts of changing weather patterns and sea level fluctuations. Protect neighborhoods, infrastructure and facilities, the shoreline, and natural resources from the impacts of climate change. Require new developments to include an evaluation of climate change impacts in the project review process. Shoreline and public access improvements shall be designed to allow future increases in elevation along the shoreline edge to keep up with higher sea level values, when they occur. Design elements shall include providing adequate setbacks to allow for future elevation increases of at least 3 feet from the existing elevation along the shoreline.

City of Richmond Municipal Code

Stormwater Management and Discharge Control

The formal stormwater management and discharge control ordinance for the City is described in Chapter 12.22 of the Richmond Municipal Code (RMC). The ordinance describes triggers and requirements for stormwater control plans, illicit discharge prohibitions, and BMPs for development projects. The ordinance requires new development that could result in the release of stormwater pollutants to take all practicable measures to reduce pollutants, in compliance with the CWA.

Excavation, Grading, and Earthwork Construction Ordinance

Section 12.44.030 of the City Building Department Excavation Grading and Earthwork ordinance of the RMC requires that a registered civil engineer for projects within City limits prepare a preliminary and final Erosion and Sediment Control Plan (ESCP). The preliminary plan should define the measures to control and minimize erosion, sedimentation, and fugitive dust during the construction of the project. The final plan should include details about operational control features put in place to minimize soil erosion, maximize sediment interception, and control runoff from the Project Site.

Flood Damage Prevention

Chapter 12.56 of the RMC includes detailed standards of construction for building within designated flood zones. Per this chapter, a development permit is required for any construction or other development within any area designated on a FEMA FIRM as Zone A or Zone VE (subject to a 100-year flood hazard), or Zone X (subject to a 500-year flood hazard). The City Public Works Department reviews all development permits to determine that permit requirements have been satisfied, all other State and federal permits have been obtained, the site is reasonably safe from flooding, and the proposed development does not adversely affect the carrying capacity of areas where base flood elevations have been determined but a floodway has not been designated.

4.8.3 ENVIRONMENTAL SETTING

Information provided in this section is derived from a number of sources including the FEMA FIRM database, a preliminary drainage study (**Appendix C**) for the Modified Project, and other publically available geospatial, climatic, and environmental data. This analysis focuses on the manner in which development could alter the hydrology and water quality from baseline conditions, which are defined for the purposes of the analysis in this section as physical conditions on or around the publication of the NOP in July 2019.

4.8.3.1 Watershed

The Project Site lies within the San Francisco Bay Central hydrologic Planning Area (Central HPA) as designated by the SFBRWQCB (SFBRWQCB, 2017). The Central HPA surrounds the central Bay with the City of Richmond along the eastern boundary, the City of San Francisco along the southern boundary, and the Marin area (San Rafael, Larkspur, and Mill Valley) comprising a majority of the western boundary (**Figure 4.8-1**). Drainage in the Central HPA varies depending upon the side of the Bay. The Project Site is situated within the northeastern boundary of the Central HPA. Surface water runoff in the vicinity of the Project Site flows westward from the higher elevations of the Potrero Ridge toward the Bay. There are no

water resources (streams, creeks, rivers, ponds, or lakes) designated by the SFBRWQCB within the Project Site, except for natural and man-made drainages forming watersheds isolated from the surrounding region that cascade down the upper elevations located on the interior of the Project Site and discharge into the Bay. Designated Waters of the U.S., as recognized by the USACE, are discussed in **Section 4.3**.

4.8.3.2 Precipitation

The climate of the Bay Area is characterized as Mediterranean, with cool, wet winters and relatively warm, dry summers. Annual rainfall in this region is variable depending on the year, but averages approximately 24 inches per year with the majority of rainfall occurring between October and April (U.S. Climate Data, 2019). Analysis of long-term precipitation records indicates that wetter and drier cycles, lasting several years each, are common in the region. Floods in the Bay Area generally result from intense rainstorms following prolonged rainfall that has saturated the ground. Peak flows are usually of short duration.

4.8.3.3 Drainage

Surface runoff from lands within the Modified Project area and lands tributary to the Modified Project area originate from the ridge located approximately one fourth to one half mile east of the western coastline. Elevation changes from approximately 350 feet at the top of the ridge to sea level. The existing landform in the eastern portions of the watersheds includes natural slopes in excess of 35 percent slope. On the western side of Stenmark Drive the land is generally flat and contains a variety of industrial development. There are 12 distinct watersheds defined by the topography of the Project Site, varying in size from 2 acres to 57.6 acres. Each watershed has a separate discharge point to the Bay (**Figure 4.8-2**). The eastern portion of each watershed is steeper upland where runoff flows over land into a system of natural channels and ravines. Drainage is diverted from the natural overland flows into culverts that discharge into the Bay.

The existing storm drain system on the property was designed to collect water that falls on impermeable surfaces, such as roads and parking lots, through French drains and inlets in streets and landscaped areas (**Figure 4.8-2**). The drain system was installed in the 1940s and upgraded in 1983. The system consists of French drains, six concrete catch basins, pipe inlet headwalls, and underground concrete culverts that convey stormwater to 11 outfalls. The outfall pipes emerge at the shoreline a few feet upstream from the edge of the shoreline; water discharged from the outfalls flow across the shore and into the Bay.

4.8.3.4 Flooding

Flooding is an inundation of normally dry land as a result of rise in the level of surface waters or rapid accumulation of stormwater runoff. Flooding can also occur due to tsunamis, seiches, or the failure of dams.

FEMA, through its FIRM program, designates areas where flooding could occur during a 1 percent annual chance (100-year) flood event or a 0.2 percent annual chance (500-year) flood event. The FIRM defines

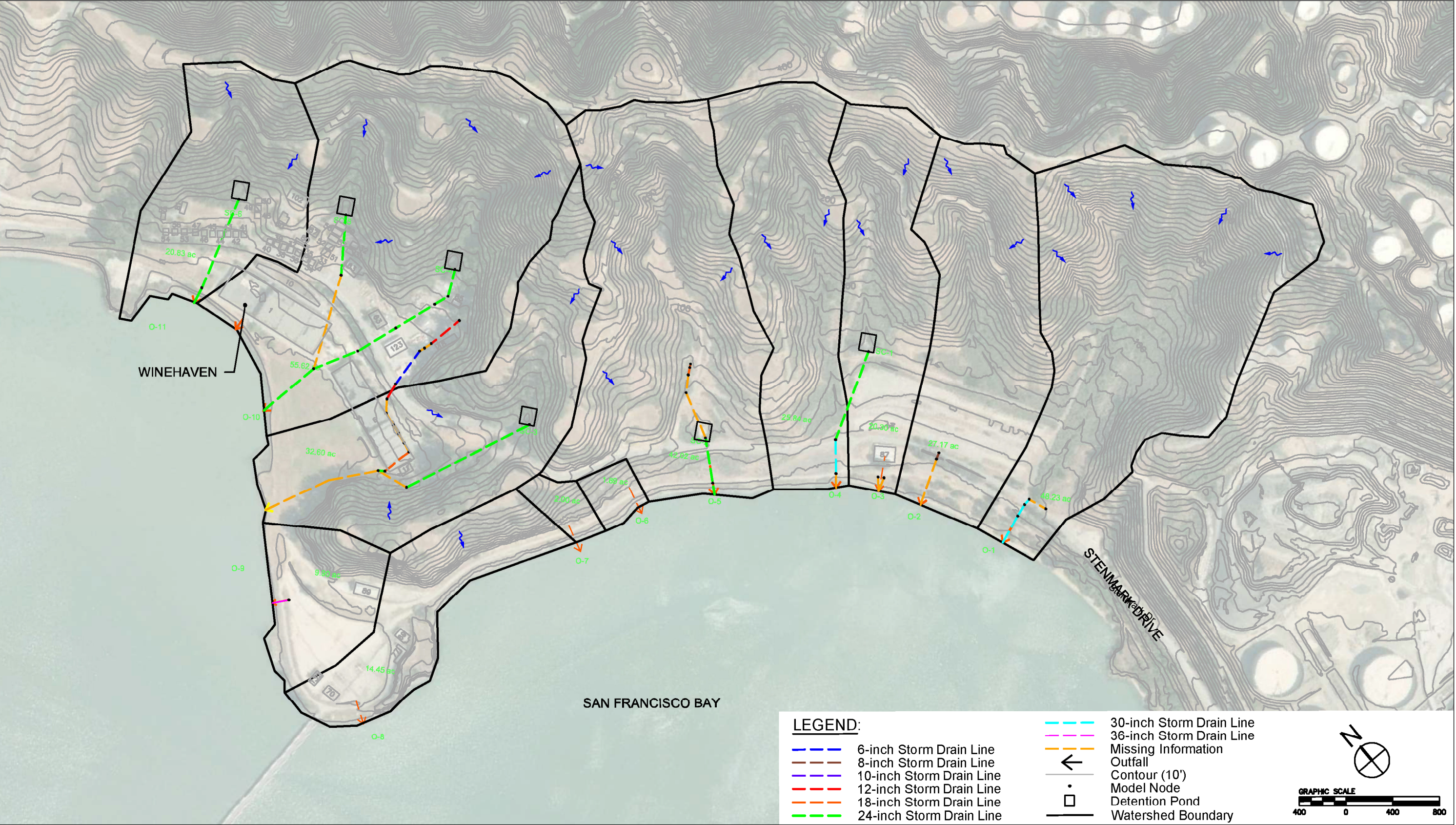


Figure 4.8-2
Drainage Watershed Map

the Base Flood Elevation (BFE) in some areas of 100-year flood zones. FEMA defines the areas of inundation by a 100-year flood event as Zone A in the FIRMs. Zone A areas with a specified BFE are further delineated as Zone AE. Areas designated as Zone V are subject to inundation by a 100-year flood event with additional hazards that result from storm-induced velocity wave action by a 3-foot or higher wave. Similar to Zone AE, Zone VE indicates that a BFE has been designated for Zone V. Most municipalities do not allow construction within Zone A unless the applicant raises the development above the BFE.

Based on the most recent update of the FIRM for the Project Site, the majority of the Project Site which is designated for development as shown in the site plans in **Section 3.0** is located within Zone X, which is outside of both the 100- and 500-year floodplains (**Figure 4.8-3**). The only infrastructure that would be located within a potential flood zone is the existing pier.

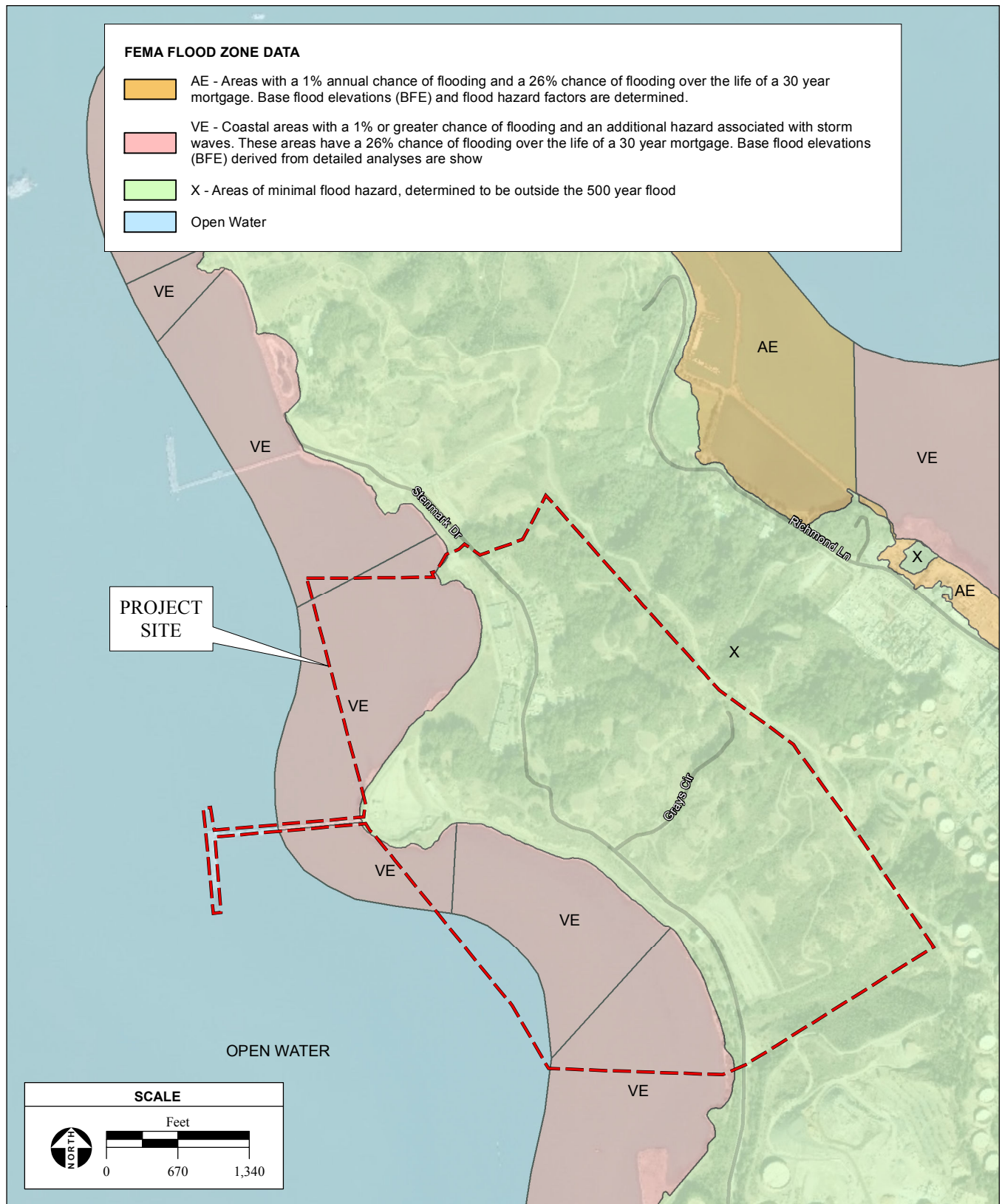
Tsunami and Seiche

A tsunami is waves caused by an underwater earthquake, landslide, or volcanic eruption. Flooding from a tsunami is more likely to affect Pacific Ocean coastlines. Flooding from a tsunami could generally affect low-lying areas along the Pacific Coast and the Bay shoreline; however, the Project Site is not located within a mapped tsunami inundation area (California Geological Survey, 2019b).

A seiche is defined as a surface water free or standing wave oscillation that is contained within a partially or completely enclosed basin. Seiche waves are initiated by some event occurring within the enclosed basin – commonly meteorological (e.g., wind or pressure changes), geologic (e.g., earthquake), or other mass movement such as a surface or subsurface landslide, which results in a movement of water within the basin as it reflects off the perimeter of the basin. The Bay is partially enclosed, with outlets to San Pablo Bay, as well as the Pacific Ocean via the Golden Gate Bridge, and is relatively shallow, with a mean depth of approximately 27.6 feet (City of Richmond, 2016c). Geologic-induced seiche events have not been documented in the Bay and meteorological effects are quickly dissipated due to the connection with the Pacific Ocean.

Sea Level Rise

San Francisco Bay, the largest estuary on the west coast of the North and South American continents, has witnessed a sea level rise of approximately 7.6 inches over the past 150 years, which is equivalent to approximately 0.05 inches per year (BCDC, 2019). As a result of increasing global temperatures, sea levels are expected to continue rising for the foreseeable future. Using the Intergovernmental Panel on Climate Change greenhouse gas emission scenarios, in 2010, the California Climate Action Team developed sea level rise projections (relative to sea levels in 2000) for the state that range from 10 to 17 inches by 2050, 17 to 32 inches by 2070, and 31 to 69 inches at the end of the century (BCDC, 2019). Recently, the BCDC modeled the effects of sea level rise on the shoreline of the Bay. **Figure 4.2-1** depicts the inundation areas of the two scenarios modeled: a 12-inch and a 52-inch sea level rise. As the figure illustrates, the modeling indicates that Point Molate would be largely unaffected by a rise of 12 inches, and only a tiny portion of the Project Site, located near the southern boundary, would be affected by a 52-inch rise in sea level. This holds for the most extreme increase in sea level rise mapped by BCDC of 108 inches (BCDC, 2020). Additionally, none of the Modified Project's Planning Areas are located in the areas affected by either of these scenarios.



SOURCE: FEMA National Flood Hazard (NFHL), 2019; AES, 10/30/2019

Point Molate Mixed-Use Development SEIR / 216544 ■

Figure 4.8-3
FEMA Flood Insurance Rate Map

4.8.3.5 Groundwater Basin

The Project Site is located in the northern part of the East Bay Plain Groundwater Basin, as designated by the SFBRWQCB. In general, groundwater is found in flatland areas with alluvial soils. In areas underlain by the clay-rich soils known as Bay Mud, the groundwater basin is shallow due to poor transmissivity of clayey soils (refer to **Section 4.6**). At the Project Site, groundwater flow is generally towards the Bay in an east-to-west direction. Groundwater flow direction, flow rate, and elevation are likely affected by daily and seasonal tidal and precipitation events (Plane et al, 2019). There are no aquifers underlying the Project Site that are capable of providing potable water in quantities available to meet the needs of previous on-site developments (U.S. Navy [Navy], 2002a). Groundwater is not utilized on the Project Site as a potable water source and accordingly, no groundwater supply wells are located on the Project Site.

4.8.3.6 Water Quality

The Project Site does not contain surface water features, except for several ephemeral drainages that discharge stormwater runoff into the Bay. Although the SFBRWQCB has not designated beneficial uses for drainages on the Project Site, water quality of runoff from the Project Site must comply with water quality objectives outlined within the Basin Plan to protect beneficial uses of the Bay. The Basin Plan lists both narrative and numerical objectives to provide general descriptions as well as numerical baseline objectives for water quality standards.

Under Section 303(d) of the CWA, states periodically prepare a list of all surface waters within their boundaries for which beneficial uses of the water—such as for drinking, recreation, aquatic habitat, and industrial use—are impaired by pollutants. Such waters include estuaries, lakes, streams, and groundwater basins that fall short of state surface water quality standards, and which are not expected to improve within the next two years. States establish a priority ranking of these impaired waters for purposes of developing plans that include TMDLs. These plans describe how an impaired water body will meet water quality standards through the use of TMDLs. A TMDL is a calculation of the maximum amount of a pollutant that a water body can receive and still meet water quality standards and an allocation of that amount relative to the source of the pollutant.

The SFBRWQCB is currently developing TMDL projects to address more than 160 of the approximately 270 303(d) listings for 88 regional water bodies impaired by a variety of pollutants (SFBRWQCB, 2019). When these projects are finalized and TMDLs are completed, the Basin Plan shall be amended to include the TMDLs as water quality objectives.

Surface Water Quality

The Bay is an estuary with complex hydrodynamics that result in intricate sediment and chemical fate and transport processes.⁴ Water quality in the Bay is influenced by a variety of factors including a mix of point and non-point source discharges, groundwater and surface water interactions, and water quality/water quantity relationships. A number of water bodies in the Bay are impaired due to excessive siltation, but it

⁴ Fate and transport refers to how chemicals degrade and where chemicals travel in the environment when they are released.

is very difficult to distinguish between excessive siltation and impairment due to flow alterations. Central San Francisco Bay, San Pablo Bay, San Pablo Creek, and Wildcat Creek are listed among the impaired water bodies in the Bay region under Section 303(d) of the CWA. Pollutants in these water bodies include chlordane, dichlorodiphenyltrichloroethane, dieldrin, dioxins, furans, mercury, polychlorinated biphenyls (PCB), selenium, polycyclic aromatic hydrocarbons, diazinon, invasive species, and trash (SWRCB, 2016).

During periods of wet weather, rain carries pollutants such as trash, oil, pesticides, fertilizers, and household chemicals from all parts of a watershed into surface water bodies such as storm drains, streams, rivers, reservoirs, or marshes. In an urban setting, natural drainage patterns have been altered and stormwater runoffs, as well as non-storm discharges (irrigation water, accidental spills, washdown water, etc.), pick up sediments and contaminants from land surfaces, and transport these pollutants into surface and groundwater. These diffuse sources of pollutants range from parking lots, bare earth at construction sites, agricultural sites, and many other sources. The total amount of pollutants entering aquatic systems from these diffuse, non-point sources is now generally considered to be greater than that from any other source, such as pipe discharges (point source) (San Francisco Estuary Institute, 2010).

Groundwater Quality

Groundwater quality can be degraded by a variety of current and historical urban, industrial, and agricultural activities such as chemical spills, underground storage tank and aboveground storage tank leaks, landfill leachate, septic tank failures, and chemical seepage via shallow drainage wells and abandoned wells. Saltwater intrusion can also degrade the quality of aquifers. Because the groundwater basin underlying the Project Site is designated for municipal use, MCLs govern water quality on the Project Site. The Project Site is located in an area of historically heavy industrial activity including the Chevron®-Richmond Refinery located adjacent to the Project Site. The Navy used the Project Site as a fuel depot, and the government closed the Navy base in September 1995. Past uses of the Project Site, particularly by the Navy, have led to soil, groundwater, and surface water contamination, which have been and continue to be remediated through the activities described in **Section 4.7**.

4.8.4 2011 FEIR ANALYSIS

This section provides a summary of the impacts to hydrology and water quality conditions for the Casino Project analyzed in the 2011 FEIR, followed by a description of any changes since the 2011 FEIR that relate to hydrology and water quality.

4.8.4.1 2011 FEIR Summary of Impacts

Impacts

The 2011 FEIR determined that the Casino Project would involve earth moving, grading, quarrying, and excavation activities during construction that would have resulted in the alteration of the existing topography of the Point Molate Site. These activities were expected to cause changes in on-site drainage patterns and increases in erosion and siltation. Furthermore, stormwater runoff could have adversely impacted surface water and shallow groundwater quality. These would have been potentially significant impacts. Implementation of the mitigation measures in Section 5.2.2 of the 2011 FEIR, including the

incorporation of BMPs into the SWPPP for the Casino Project and the development of an ESCP, were determined to reduce impacts to on-site drainage patterns and contamination of surface waters during earth moving, grading, quarrying, and excavation to a less-than-significant level with mitigation incorporated.

Construction of the Casino Project may have also required dewatering during trenching and excavation activities, which could have led to contamination of surface waters during disposal. This would have been a potentially significant impact. Implementation of the mitigation measures in Section 5.2.2 of the 2011 FEIR would have reduced impacts from dewatering. The 2011 FEIR determined this impact to be less than significant.

Operation of the Casino Project would have introduced an additional source of pollutants to surface water and groundwater, and increased runoff that could have increased flooding risk and transported contaminants to the Bay and the groundwater beneath the Project Site. To control operational stormwater pollution in order to protect water quality and reduce flooding, the Casino Project included a combination of site planning, structural treatment BMPs, and non-structural source control BMPs. Mitigation measures, including a Demolition and Containment Plan for pier renovation, project features to reduce impervious surfaces, and incorporation of bioretention facilities into the drainage plan, were included in Sections 5.2.2 and 5.2.11 of the 2011 FEIR which would have reduced potential surface and groundwater quality, and flooding impacts. Therefore, the 2011 FEIR determined these impacts to be less than significant.

The 2011 FEIR determined that the Casino Project would not place structures within a floodplain or result in inundation by seiches or tsunamis, and it would not have depleted groundwater or interfered with recharge such that there would be a net deficit in aquifer volume. Therefore, the Casino Project would not have exposed people or structures to a significant risk of loss, injury, or death involving flooding or depleted the local aquifer. No impact would have occurred.

Cumulative Impacts

The 2011 FEIR determined that the simultaneous construction of the Casino Project and other development and expansion projects within the same drainage basin could have resulted in temporary cumulative impacts to surface water quality until the projects were completed, due to incremental increases in the pollutant concentration of stormwater runoff. However, all development projects over one acre in size are required to develop and adhere to a SWPPP and an ESCP. This would have reduced the Casino Project's contribution to cumulative impacts. Therefore, the 2011 FEIR determined these cumulative impacts to be less than significant.

In addition to the impacts described above, operation of the Casino Project would have introduced new impervious surfaces potentially resulting in additional off-site flows. However, incorporation of the grading and drainage plan (Appendix H of the 2011 FEIR) for the Casino Project in combination with the relatively small increase in stormwater runoff from the Project Site into the Bay, drainage- and flooding-related impacts from the development of the Casino Project would not have been cumulatively considerable. Furthermore, cumulative projects, in addition to the Casino Project, would have been required to comply with the County's *Stormwater C.3 Guidebook* that incorporates countywide design guidelines for reducing

potential cumulative impacts on stormwater runoff and downstream drainages. Therefore, the 2011 FEIR determined that these impacts would have been less than significant.

In the 2011 FEIR, it was determined that Project Site was not located in a floodplain. Therefore, the grading and development of the Project Site would not result in a cumulatively considerable impact to floodplain management. No cumulative impact would have occurred.

4.8.4.2 Changes Since the 2011 FEIR

Since the 2011 FEIR, the project being proposed at the Point Molate Site has been modified and the regulatory environment under which the project would be undertaken has changed. The following are changes relevant to hydrology and water quality.

- The 2011 FEIR required that Guidiville Rancheria apply for the Volatile Organic Compound (VOC) and Fuel General Permit, Order Number R2-2012-0012 NPDES Number CAG912002, because the Casino Project proposed to discharge or reuse extracted or treated groundwater resulting from the cleanup of groundwater polluted by VOCs, fuel leaks, and other related wastes. The Modified Project does not propose to discharge or reuse extracted or treated groundwater resulting from cleanup of hazardous materials, so application for the VOC and Fuel General Permit is not analyzed in this Subsequent Environmental Impact Report (SEIR).
- The 2011 FEIR relied on the City of Richmond General Plan that was adopted in 1994. However, since the 2011 FEIR, the City adopted a new General Plan in 2012 that was updated through 2030. This new General Plan recognized and rewrote the content pertaining to flood and stormwater, but it is primarily similar to the former General Plan. Furthermore, the new General Plan has included new content concerning sustainability and ecological friendly practices concerning water resources and stormwater management. Additionally, Appendix G of the CEQA Guidelines was updated in 2018. The significance thresholds have primarily remained the same since the 2011 FEIR with a few additional details and a new significance threshold. Additional details added include examining more forms of flooding, including tsunamis and seiches, and the new significance threshold pertains to examining the impacts to existing water quality control plans and sustainable groundwater management plans.

4.8.5 IMPACTS

4.8.5.1 Thresholds of Significance

Criteria for determining the significance of impacts to hydrology and water quality have been developed based on Appendix G of the CEQA Guidelines and relevant agency thresholds. Impacts associated with hydrology and water quality would be considered significant if the Modified Project would:

- violate any water quality standards or WDRs or otherwise substantially degrade surface or groundwater quality;
- substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin;

- substantially alter the existing drainage pattern of the Project Site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
 - result in a substantial erosion or siltation onsite or offsite;
 - substantially increase the rate or amount of surface runoff in a manner which would result in flooding onsite or offsite;
 - create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or
 - impede or redirect flood flows;
- in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation; or
- conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

4.8.5.2 Method of Analysis

This section identifies any impacts to hydrology and water quality that could occur from construction and operation of the Modified Project. Impacts to hydrology and water quality were analyzed based on an examination of the Project Site, the proposed stormwater and drainage system presented in **Section 3** and **Appendix C**, the regulations surrounding hydrology and water quality as described in **Section 4.8.2**, published information regarding the water resources in the vicinity of the Project Site, and field studies. This analysis focuses on the manner in which development could affect hydrology and water quality in or near the Project Site compared to baseline conditions, which are defined for the purposes of the analysis in this section as the physical conditions in the vicinity of the study area on or around the publication of the NOP in July 2019. The hydrology and water quality analysis below analyzes Option 1 (Residential-Heavy Option) because its impacts on hydrology and water quality would be greater than the impacts of Option 2, and thus represents a worst case. Where it is concluded that impacts to hydrology and water quality resulting from the Modified Project would exceed the significance thresholds listed below, mitigation measures are identified to reduce impacts to less-than-significant levels.

4.8.5.3 Effects Found Not to be Significant Without Further Analysis

Review and comparison of the existing setting conditions and the Modified Project characteristics with the significance criteria clearly show that no impacts would be associated with the following criterion for the reasons stated below.

The Modified Project would not result in significant impacts related to hydrology or water quality during the operation of the off-site infrastructure.

The Modified Project would not result in significant impacts related to hydrology or water quality during operation of the off-site infrastructure. The off-site infrastructure includes utilities improvements and the widening of Stenmark Drive. Impacts resulted from the construction of the off-site infrastructure are analyzed below, but operation of the utility improvements would not interfere with hydrology or water resources beyond what is analyzed for construction. Therefore, a discussion of operational hydrology and

water quality impacts resulting from off-site infrastructure improvements is not included in the impact analysis below.

4.8.5.4 Project-Level Impacts

IMPACT 4.8.1	VIOLATE ANY WATER QUALITY STANDARDS OR WASTE DISCHARGE REQUIREMENTS OR OTHERWISE SUBSTANTIALLY DEGRADE SURFACE OR GROUND WATER QUALITY
Significance Before Mitigation	Potentially Significant
Mitigation Measures	Modified Project Mitigation: MM 4.8-1; MM 4.8-2; MM 4.8-3 Bay Trail Mitigation: HYD-1; HYD 2
Significance After Mitigation	Less Than Significant
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

Stormwater pollution, during both construction and operational phases of the Modified Project, can include oils, fuels, heavy metals, pesticides, and other COCs that originate on rooftops, parking lots, and other impervious surfaces that are subsequently washed into local waterways during storm events. Pollutants also include sedimentation caused by erosion from such activities as ground clearing for construction, chemicals used for lawn and garden maintenance, and litter. New and increased levels of urban land use on the Project Site can increase the level of stormwater pollution that could ultimately wash to the Bay. Any increased pollution that would violate water quality standards is considered a potentially significant impact.

Construction of the Modified Project

During construction, on-site development under the Modified Project would be subject to the NPDES Construction General Permit requirements which include preparation of a SWPPP along with an NOI prior to construction. Implementation of the SWPPP would begin with the commencement of construction and continue through the completion of the Modified Project. At a minimum, the SWPPP would include a description of construction materials, practices, and equipment storage and maintenance, a list of pollutants likely to contact stormwater, site-specific erosion and sedimentation control practices, a list of provisions to eliminate or reduce discharge of materials to stormwater, and BMPs for fuel and equipment storage. The SWPPP would also include BMPs that would reduce the transportation of pollutants offsite. The Applicant (Winehaven Legacy LLC) would develop and implement a monitoring program as required under the Construction General Permit. The Applicant would require the contractor to conduct inspections of the construction site prior to anticipated storm events and after the actual storm events. During extended storm events, inspections would be conducted after every 24-hour period. The goals of these inspections are:

- to identify areas contributing to stormwater discharge;

- to evaluate whether measures to reduce pollutant loadings identified in the SWPPP are adequate and properly installed and functioning in accordance with the Construction General Permit; and
- to evaluate whether additional control practices or corrective maintenance activities are needed.

Equipment, materials, and workers would be available for rapid response to spills and/or emergencies. All corrective maintenance or BMPs would be performed as soon as possible, depending upon worker safety. Upon completion of the Modified Project, the Applicant would submit a Notice of Termination to the RWQCB.

The reconfiguration of the existing pier and construction of the proposed watercraft facilities may require construction within waters of the U.S. that would be subject to permitting requirements of the USACE under Section 404 of the CWA and Section 10 of the Rivers and Harbors Act. Preparation of the Section 404/Section 10 permit applications would require a Pre-Construction Notification (PCN) and supporting documentation. A PCN outlines project activities, areas of impact, construction techniques, and methods for avoiding and reducing impacts on water quality. Prior to approval of the Section 404 permit, approval of Water Quality Certification and/or WDRs must be obtained from the SFBRWQCB. Permit approval from BCDC is required for placing solid material including pilings, boat docks, or other fill and/or dredging or other extraction of material from or into waters of the state and within the 100-foot shoreline band inland from the mean high tide line along the shoreline. BCDC permit conditions require the use of specified construction methods to protect water quality. Permit conditions are project-specific and can include requirements to obtain plan review and approval before construction begins, construct, guarantee and maintain public access and view corridors to the Bay, and mitigation requirements to offset adverse environmental impacts of the project (BCDC, 2020c). Compliance with state and federal regulations including the CWA and BCDC requirements would occur through the permitting process. At a minimum, the responsible agencies would require the Applicant to implement standard BMPs (such as the use of containment booms and turbidity curtains, and prohibitions on discharges) to avoid and minimize impacts to water quality.

Because of the history of hazardous materials contamination at the Project Site, a Covenant to Restrict Use Permit (CRUP) was recorded on the property in 2010. The CRUP contains restrictions developed by the SFBRWQCB to protect water quality and public health. Under the terms of the CRUP, prior approval from SFBRWQCB is required for: activities that disturb or excavate soils greater than 24 inches below the ground surface, dewatering activities, disturbance of groundwater monitoring wells, or disturbance of underground storage tanks. Prior to approval, the SFBRWQCB may require conditions, including preparation of a Soil and Groundwater Management Plan (SGWMP). For more details on the restrictions imposed by the CRUP, refer to **Section 4.7** and Appendix C in **Appendix G**.

In addition to the SWPPP and CRUP, a SGWMP was prepared for activities that may disturb soil or produce groundwater at the Modified Project Site. The SGWMP was approved by the RWQCB in 2012 (RWQCB, 2012a). The SGWMP describes control measures that must be implemented during earthwork, dewatering, building demolition, and waste management activities. The SGWMP identifies stormwater management control measures to protect surface and groundwater quality, including erosion control BMPs and protocols for handling and disposing of contaminated soil, materials, and groundwater.

As discussed in **Section 4.8.2**, Section 12.44.030 of the RMC requires that a registered civil engineer prepare a preliminary and final ESCP to define the measures to control and minimize erosion, sedimentation, and fugitive dust during the construction of the project within City limits. Additionally, the MRP provides construction-related measures to regulate stormwater runoff from construction of MS4s.

Even with the implementation of and adherence to a project-specific SWPPP, SGWMP, MRP, ESCP, and the 2010 CRUP to protect surface and groundwater quality, construction activities such as dewatering for underground development or severe rain during construction could result in the release of chemical contaminants into the Bay, which could be toxic to sensitive wildlife or the benthic community in and within proximity of the Modified Project. Dewatering may be necessary to facilitate construction due to the proposed underground improvements; any dewatering would be permitted through the RWQCB. Components of the Construction General Permit require provisions for dewatering from excavation sites to be included in the SWPPP. With the implementation of **Mitigation Measure 4.8-1**, encountered groundwater shall be disposed of at an appropriately permitted facility such as a wastewater treatment plant (WWTP) in accordance with the requirements of the NPDES permit. Depending on the groundwater quality and concentration of contaminants, water may be transported via tanker truck to a hazardous materials processing plant or the RMSD WWTP.

Mitigation Measure 4.8-1 would require the inclusion of measures that would be protective to Bay ecological resources and would protect the Bay from turbidity and contaminant impacts during construction. **Mitigation Measure 4.8-2** would require the development and implementation of a Demolition and Containment Plan that would minimize the potential for contamination of the Bay from the removal of the petroleum pipeline during pier renovation. This is a less-than-significant impact with mitigation.

Construction of the Bay Trail

Impacts from construction and use of the San Francisco Bay Trail (Bay Trail) are analyzed within the San Francisco Bay Trail at Point Molate Initial Study/Mitigated Negative Declaration (IS/MND), which is incorporated by reference as described within **Section 1.4.4**. The Bay Trail IS/MND determined that water quality impacts from the construction of the Bay Trail were less than significant after mitigation. During construction there is a potential for suspended sediment or oil and grease from construction vehicles to enter surface waters or the Bay via overland flow or existing culverts. However, the Bay Trail IS/MND identified **Mitigation Measure HYD-1** and **HYD-2** (referenced in **Section 4.8.6**), which would reduce the impacts to less than significant by developing and implementing a SWPPP, which identifies pollution control practices designed to minimize erosion during construction, stabilize construction areas, control sediment, control pollutants from construction materials, and address post construction runoff quantity (volume) and quality (treatment). The SWPPP would specify BMPs that must be implemented to control run-on and run-off from the construction site, prevent and address fluids/oil and grease from construction equipment from entering into surface waters or surrounding soils, secure stockpiles and active work areas prior to rain events, and conduct visual inspections to ensure the SWPPP is being implemented. With implementation of **Mitigation Measures HYD-1** and **HYD-2**, violation of water quality standards would be less than significant with mitigation.

Construction of Off-Site Improvements

Construction of off-site improvements, including road widening, underground and aboveground utility line upgrades, and the potential construction of the wastewater pipeline connecting the Project Site to either the Chevron®-Richmond Refinery (Wastewater Treatment Variant A) or City WWTP (Wastewater Treatment Variant B), would require grading, excavation, and other construction-related activities that could result in temporary violation of any water quality standards or WDRs or otherwise substantially degrade surface or groundwater quality due to sedimentation caused by soil disturbance or oil and grease from construction vehicles. This is a potentially significant impact. As described for on-site development, off-site development under the Modified Project would be subject to the NPDES Construction General Permit requirements which include preparation of a SWPPP along with an NOI prior to construction. Additionally, as discussed in **Section 4.8.2**, Section 12.44.030 of the City Building Department Excavation, Grading, and Earthwork ordinance in the RMC requires that a registered civil engineer prepare a preliminary and final ESCP to define the measures to control and minimize erosion, sedimentation, and fugitive dust during the construction of projects within the City limits. With the implementation of **Mitigation Measure 4.8-1**, which identifies BMPs that would be included in the SWPPP to address all construction procedures at off-site locations, the impact of the construction of off-site improvements would be less than significant.

Operation

Development of the Modified Project would add impervious surfaces to the Project Site due to residential and commercial development in currently undeveloped areas. This would increase the amount of surface run-off at the Project Site. Therefore, operation of the Modified Project could potentially degrade surface or groundwater quality.

The Modified Project would incorporate LID features to comply with the MRP Provision C.3 treatment requirements. Provision C.3 requires the incorporation of LID features to prevent increases in runoff and pollutant discharges from projects. As described in **Appendix C**, stormwater from the development areas will be routed through treatment ponds prior to discharge to the Bay. Other specific LID features such as the incorporation of bioretention areas, rainwater harvesting, and site design measures would be required to comply with MRP Provision C.3. With the incorporation of the required LID features, Project Site runoff quality is expected to comply with applicable water quality objectives for all of the pollutants of concern for the protection of beneficial uses. The City's Public Works Department would review final project plans to ensure they incorporate design standards consistent with the requirements of the Contra Costa Clean Water Program and the MRP. These requirements are imposed by law and therefore no further mitigation is necessary.

As discussed in **Section 3.4.6** the Modified Project would need fewer stormwater outfalls than currently exist. Any unused outfalls will be abandoned in place (**Figure 3-6**). The proposed system will be designed with energy dissipaters so that the post-project flow velocities are less than pre-project flow velocities, thereby reducing potential of erosion downstream of the outfall, which reduces the potential for stormwater to degrade water quality through sedimentation.

At buildout, the Modified Project would generate average daily wastewater flows of 275,672 gallons per day (gpd), with a peak dry weather flow of 413,508 gpd and a peak wet weather flow of 827,016 gpd

(**Appendix E**). Wastewater would be collected in a new system of pipelines and lift stations. Portions of the existing wastewater collection system in the Historic District may be used if found to be in adequate condition and capacity. Wastewater from operation of the Modified Project would be treated by an on-site WWTP (Variant A) or by the existing RMSD WWTP (Variant B).

Under Wastewater Treatment Variant A, a package WWTP would be constructed onsite (**Figure 3-19**). The WWTP would be built in two phases with each phase having the capacity to treat an average day flows of 250,000 gpd and peak day flows of 500,000 gpd. At buildout, the WWTP would provide 1,000,000 gpd peak capacity. The proposed facility would use conventional activated sludge coupled with biological nutrient removal. Effluent treatment would be finished by membrane clarification and ultraviolet (UV) light disinfection. Effluent would meet Title 22 disinfected tertiary treatment requirements and therefore could be used for landscape irrigation, commercial cooling or air conditioning, toilet flushing, and industrial applications. The package WWTP would be permitted under an individual set of WDRs issued by the SFBRWQCB. The WDRs would contain effluent limitations, operational requirements, discharge specifications, and monitoring and reporting requirements.

Recycled water would be used on the Project Site for landscape irrigation. Approximately 25 acres on the Project Site would be irrigated, with average water demand estimated at 80,000 gpd and peak demand during the summer estimated at 196,000 gpd (**Appendix E**). Recycled water that exceeds the irrigation demands of the Project Site would be conveyed by pipeline to the adjacent Chevron®-Richmond Refinery, which would use the recycled water to fulfill their operational needs (as addressed in **Section 4.14**). Underground recycled water tanks would be installed to provide short-term storage and operational flexibility. Each phase would include the development of 15 50,000-gallon underground recycled water storage tanks. The first phase would provide 750,000 gallons of recycled water storage, which would expand to 1.5 million gallons at buildout.

The use of recycled water would be permitted separately from the treatment plant under the State's Water Reclamation Requirements for Recycled Water Use (Order WQ 2016-0068-DDW). The recycled water system would be consistent with the regulations and standards covered under the State's recycled regulations and associated standards contained in Title 17 and Title 22 public health rules. Recycled water would be distributed through a "non-potable" water distribution system. The recycled water system would be required by the State to incorporate and maintain reliability features to ensure the safe performance of the recycled water system, such as State-approved backflow preventer devices to avoid cross-connection with the potable water system.

Over irrigating landscaped areas on the Project Site could result in the runoff of recycled water into nearby drainages or the Bay. However, the State's Water Reclamation Requirements prohibit the over-application of recycled water to the extent that it would cause ponding and runoff into adjacent surface water bodies. These policies minimize the potential for the runoff of recycled water applied through irrigation. Permitting restrictions would require that no recycled water be discharged to drainages on the Project Site or to the Bay.

Constituents associated with recycled water that have the potential to degrade groundwater include salinity, nutrients, pathogens (represented by coliform bacteria), disinfection by-products (DBP), constituents of emerging concern (CEC), and endocrine disrupting chemicals (EDC).

Salinity is a measure of dissolved solids in water and is commonly measured as total dissolved solids. Elevated salinity levels in recycled water can impair groundwater. However, recycled water would only be applied to approximately 25 acres, which is less than 10 percent of the Project Site. Precipitation percolating into the groundwater would act to dilute dissolved solids that enter groundwater from the use of recycled water.

Nitrogen is a nutrient that can be present in recycled water at concentrations that can degrade groundwater quality. The on-site WWTP would produce an effluent with a total nitrogen concentration less than 10 micrograms per Liter, which is the Safe Drinking Water Act MCL for nitrate (as nitrogen). Application of recycled water at agronomic rates minimizes the movement of nutrients below the plants' root zone. When applied to landscaped areas, some of the nitrogen in recycled water would be taken up by plant, lost to the atmosphere through volatilization of ammonia or denitrification, or stored in the soil matrix.

Pathogens in the recycled water would be removed through disinfection at the on-site WWTP. UV disinfection would avoid the generation of DBPs. CECs in recycled water as they pertain to the SWRCB's Recycled Water Policy are defined to be chemicals in personal care products, pharmaceuticals including antibiotics, antimicrobials; industrial, agricultural, and household chemicals; hormones; food additives; transformation products, inorganic constituents; and nanomaterials. Many of the CECs are so new that standardized measurement methods and toxicological data for interpreting their potential human or ecosystem health effects are unavailable. Monitoring of health-based CECs or performance indicator CECs is not required by the SWRCB for recycled water used for landscape irrigation due to the low risk of ingestion of the water.

Endocrine disrupting chemicals are mostly man-made, found in various materials such as pesticides, metals, additives, or contaminants in food, and personal care products. Human exposure to EDCs occurs via ingestion of food, dust, and water, via inhalation of gases and particles in the air, and through the skin. Perchlorate is an endocrine disrupting chemical that may be present in hypochlorite solutions, which is a type of disinfectant used for wastewater. The use of UV disinfection avoids the generation of perchlorate.

Because recycled water generated by the on-site WWTP would be tertiary treated effluent meeting the State's Water Reclamation Requirements for Recycled Water Use and would be disinfected using UV light, potentially harmful constituents are expected to be present at levels that do not present the potential to degrade groundwater quality. Additionally, recycled water would be used on a small portion of the Project Site and the percolation of precipitation on the Project Site would dilute any constituents that enter the groundwater. Compliance with the State's Water Reclamation Requirements for Recycled Water Use would ensure that the use of recycled water on the Project Site would not adversely affect beneficial uses or degrade groundwater quality.

Recycled water delivered to the Chevron®-Richmond Refinery would be used within the cooling towers and boilers at the Chevron®-Richmond Refinery. Any disposal of effluent associated with the processing of recycled water would be conducted under the WDRs issued by the SFBWQCB for the Chevron®-Richmond Refinery. **Mitigation Measure 4.8-3** includes provisions for the treatment, conveyance, and use of recycled water under Wastewater Treatment Variant A to ensure that no

wastewater would be discharged prior to adequate treatment, and the Modified Project's wastewater would not degrade surface water or groundwater quality.

Under Wastewater Treatment Variant B, wastewater would be transported to the existing RMSD WWTP, where it would be treated to meet their permitting requirements, and then discharged per current operations. As discussed in **Section 4.14**, Utilities and Service Systems, after minor off-site improvements to two existing wastewater pipelines included in the Modified Project, the RMSD WWTP and its associated off-site collection system will have sufficient capacity to treat the Modified Project's wastewater.

With the incorporation of treatment ponds and other LID features, stormwater outfall energy dissipaters, and wastewater treatment, operation of the Modified Project would not violate any water quality standards or WDRs or otherwise substantially degrade surface or groundwater quality, and thus, the impact is less than significant with mitigation.

IMPACT 4.8.2	SUBSTANTIALLY DECREASE GROUNDWATER SUPPLIES OR INTERFERE SUBSTANTIALLY WITH GROUNDWATER RECHARGE SUCH THAT THE PROJECT MAY IMPEDE SUSTAINABLE GROUNDWATER MANAGEMENT OF THE BASIN
Significance Before Mitigation	Less Than Significant
Mitigation Measures	None Required
Significance After Mitigation	Not Applicable
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

Construction of the Modified Project

The Modified Project would not include groundwater extraction for the purposes of water supply. Fresh water used for the Modified Project would be provided by the public water supply system. Dewatering may be necessary to facilitate construction due to the high groundwater table and proposed underground improvements; any dewatering would be permitted through the RWQCB and would not result in a permanent impact on the basin's groundwater quantity.

Revegetation would be included in non-developed areas to minimize bare ground, thus decreasing operational erosion and siltation and encouraging stormwater to stay within the Project Site for groundwater recharge. The Modified Project would be reviewed by the City Public Works Department to confirm that the Modified Project meets the requirements of the Contra Costa Clean Water Program and the MRP, discussed in detail in **Section 4.8.2**, which require new development and redevelopment projects to incorporate treatment measures and other appropriate source control and site design features to manage runoff flows and encourage groundwater recharge. As mentioned above, the Modified Project would incorporate LID features to comply with the MRP Provision C.3 treatment requirements. The intent

of the LID features is to retain stormwater onsite and to maintain stable groundwater quantities. Features required by MRP Provision C.3 such as preserving natural drainage features, minimizing impervious surfaces, using pervious surfaces that retain rainfall, dispersing runoff to adjacent pervious surfaces, storing runoff for later use, and draining impervious surfaces to bio-retention facilities, flow-through planters or dry wells would ensure groundwater recharge on the Project Site. As a result, there would be no significant decrease in the amount of stormwater recharging to underlying water supplies. Therefore, the project would have a less-than-significant impact on groundwater levels or the sustainable groundwater management of the basin.

Construction of the Bay Trail

Impacts as a result of the construction and use of the Bay Trail are analyzed within the Bay Trail IS/MND, which is incorporated by reference as described in **Section 1.4.4**. The Bay Trail IS/MND determined that impacts from the construction of the Bay Trail on groundwater supplies were less than significant because construction of the trail would require only shallow subsurface excavations and would not impact groundwater movement or levels. While construction of the Bay Trail would increase impervious surfaces, the Bay Trail would be graded to drain to adjacent non-erodible pervious surfaces and would not increase stormwater runoff (reduce groundwater recharge). As a result, construction of the Bay Trail would not impact groundwater supplies or interfere with groundwater recharge and the impact would be less than significant.

IMPACT 4.8.3	<p>SUBSTANTIALLY ALTER THE EXISTING DRAINAGE PATTERN OF THE SITE OR AREA, INCLUDING THROUGH THE ALTERATION OF THE COURSE OF A STREAM OR RIVER OR THROUGH THE ADDITION OF IMPERVIOUS SURFACES, IN A MANNER WHICH WOULD:</p> <ul style="list-style-type: none"> ▪ RESULT IN A SUBSTANTIAL EROSION OR SILTATION ON OR OFFSITE ▪ SUBSTANTIALLY INCREASE THE RATE OR AMOUNT OF SURFACE RUNOFF IN A MANNER WHICH WOULD RESULT IN FLOODING ON OR OFFSITE ▪ CREATE OR CONTRIBUTE RUNOFF WATER WHICH WOULD EXCEED THE CAPACITY OF EXISTING OR PLANNED STORMWATER DRAINAGE SYSTEMS OR PROVIDE SUBSTANTIAL ADDITIONAL SOURCES OF POLLUTED RUNOFF ▪ IMPEDE OR REDIRECT FLOOD FLOWS
Significance Before Mitigation	Potentially Significant
Mitigation Measures	Modified Project Mitigation: MM 4.8-1; MM 4.8-2
Significance After Mitigation	Less Than Significant
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

Construction of the Modified Project

Development of the Modified Project would involve soil and groundwater remediation, and construction of structures, roadways, parking lots, and infrastructure that would require grading, excavation, and other construction-related activities that could cause soil erosion at accelerated rates. Pollutants that could be released into stormwater runoff and discharged into the Bay would include oil, gasoline and diesel motor fuel, industrial solvents, and other chemicals existing in contaminated soil or necessary for construction. Therefore, construction of the Modified Project could substantially alter the existing drainage pattern of the Project Site in a manner that could result in siltation or erosion onsite, increase runoff resulting in on-site flooding, provide substantial additional sources of polluted runoff, or impede or redirect flood flows.

Mitigation Measure 4.8-1 and **Mitigation Measure 4.8-2** require the preparation of a SWPPP and a Demolition and Containment Plan, in accordance with the Construction General Permit, which identify pollution control practices to prevent and minimize pollutants from reaching stormwater runoff. The SWPPP would be required to include BMPs that have been demonstrated to be effective at achieving Basin Plan water quality objectives and maintaining beneficial uses. The project-specific BMPs identified in **Mitigation Measure 4.8-1**, would reduce runoff from exposed soil, control stormwater runoff, and prohibit the discharge of pollutants to the Bay. With implementation of these mitigation measures, the impact would be less than significant.

Construction of the Bay Trail

Impacts as a result of the construction and use of the Bay Trail are analyzed within the Bay Trail IS/MND, which is incorporated by reference, as described within **Section 1.4.4**. The Bay Trail IS/MND determined that drainage impacts from the construction of the Bay Trail were less than significant because drainage improvements are proposed and a boardwalk would be built over a majority of wetland habitats so that shallow subsurface and surface flows are not impeded. As a result, construction of the Bay Trail would not result in substantially altering the existing drainage patterns and the impact would be less than significant.

Construction of Off-Site Improvements

Construction of off-site improvements, including road widening, underground and aboveground utility line upgrades, and the potential construction of a wastewater pipeline connecting the Project Site to the Chevron®-Richmond Refinery, would require grading, excavation, and other construction-related activities that could temporarily alter the drainage pattern of the area, causing soil erosion at accelerated rates. Therefore, construction of the Modified Project could substantially alter the existing drainage pattern of off-site construction areas in a manner that could result in siltation or erosion offsite, increase runoff resulting in off-site flooding, provide substantial additional sources of polluted runoff, or impede or redirect flood flows. **Mitigation Measure 4.8-1** and **Mitigation Measure 4.8-2** require the preparation of a SWPPP and a Demolition and Containment Plan, in accordance with the Construction General Permit, which identify pollution control practices to prevent and minimize pollutants from reaching stormwater runoff. The SWPPP would define flow diversions, containment, and treatment protocols to avoid erosion and preserve stormwater quality prior to discharge. With implementation of these mitigation measures, the impact would be less than significant.

Operation

Operation of the Modified Project would add impervious surfaces to the Project Site due to residential and commercial development in currently undeveloped areas. This would increase the amount of surface run-off from the Project Site. As discussed in **Section 3.4.6** the Project Site has 11 existing outfalls, and the Modified Project would need fewer outfalls than what currently exists, as the drainage of the site would be altered as part of the Modified Project and two outfalls would be upsized. Any unused outfalls would be abandoned in place (**Figure 3-6**). The proposed system would be designed with energy dissipaters so that the post-project flow velocities are less than the pre-project flow velocities (**Appendix C**). With the incorporation of LID features and centralized stormwater capture facilities to treat runoff prior to discharging to the Bay, as described in **Section 3.0**, surface runoff would be minimized so that substantial erosion or siltation onsite or offsite would not occur. The Modified Project would not alter the course of a stream or river. Because the Modified Project would be designed to continue to direct stormwater to the Bay, off-site flooding would not occur. The City Public Works Department would review final project plans to ensure the plans incorporate design standards consistent with the requirements of the Contra Costa Clean Water Program and the MRP. This is a less-than-significant impact.

IMPACT 4.8.4	IN FLOOD HAZARD, TSUNAMI, OR SEICHE ZONES, RISK RELEASE OF POLLUTANTS DUE TO PROJECT INUNDATION
Significance Before Mitigation	Potentially Significant
Mitigation Measures	Modified Project Mitigation: MM 4.8-1; MM 4.8-2
Significance After Mitigation	Less Than Significant
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

Construction of the Modified Project

As described in **Section 4.8.3**, the Project Site is not located within a mapped tsunami inundation area; the Bay does not experience seiches, as it is not a confined basin and any seismic action dissipates as it travels through the Bay and out towards the ocean; and the Project Site is not located within an area prone to flooding. As described in **Section 4.8.3.4**, most of the project development is outside of the 100-year and 500-year floodplains. Due to the steep shoreline of the Project Site projected rises in sea level will only increase storm surge related flooding along the immediate shoreline and would not impact the proposed development areas. This holds for the most extreme increase in sea level rise mapped by BCDC of 9 feet (BCDC, 2020). As illustrated in **Figure 4.8-3**, the only infrastructure that would be located within a potential flood zone due to sea level rise is the existing pier, which may be retrofitted for passenger use under the Modified Project. Due to standards set by the SFBRWQCB and NPDES permitting that prohibits hazardous material discharged in Bay waters and a SWPPP and Demolition and Containment Plan identified under **Mitigation Measures 4.8-1** and **4.8-2** that together define proper containment of potential contaminants, hazardous materials present on the pier are expected to be limited to small quantities of cleaning supplies that would be properly containerized to minimize the potential for

release; therefore, in the event that flooding would inundate the pier, the potential for pollution would be less than significant.

Construction of the Bay Trail

Impacts as a result of the construction and use of the Bay Trail are analyzed within the Bay Trail IS/MND, which is incorporated by reference, as described within **Section 1.4.4**. The Bay Trail IS/MND determined that impacts from the construction of the Bay Trail on the release of pollutants in flood hazard, tsunami, or seiche zones were less than significant because no structures are proposed that would be subject to seiche, tsunami, or mudflows. As a result, construction of the Bay Trail would not result in releasing pollutants in flood hazard, tsunami, or seiche zones and the impact would be less than significant.

IMPACT 4.8.5	CONFLICT WITH OR OBSTRUCT IMPLEMENTATION OF A WATER QUALITY CONTROL PLAN OR SUSTAINABLE GROUNDWATER MANAGEMENT PLAN
Significance Before Mitigation	Potentially Significant
Mitigation Measures	Modified Project Mitigation: MM 4.8-1; MM 4.8-2; MM 4.8-3 Bay Trail IS/MND Mitigation: HYD-1; HYD-2
Significance After Mitigation	Less Than Significant
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

As discussed under **Impacts 4.8.1** and **4.8.2**, construction of the Modified Project would require grading, excavation, and other construction-related activities that could result in temporary violation of any water quality standards or WDRs or otherwise substantially degrade surface or groundwater quality due to sedimentation caused by soil disturbance or oil and grease from construction vehicles. Development of the Modified Project would add impervious surfaces to the Project Site due to residential and commercial development in currently undeveloped areas. This would increase the amount of surface run-off at the Project Site, and could potentially degrade surface or groundwater quality. Therefore, implementation of the Modified Project could result in water conditions that conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. This is a potentially significant impact.

The Contra Costa Clean Water Program and the MRP are the key governing bodies which regionally implement the requirements set forth by the CWA, Basin Plan, and City stormwater regulations. As discussed under **Impacts 4.8.1** and **4.8.2**, during construction, the SWPPP described in **Mitigation Measure 4.8-1** would be required to include BMPs that have been demonstrated to be effective at achieving Basin Plan water quality objectives and maintaining beneficial uses. Operation of the optional on-site WWTP would be permitted under an individual set of WDRs issued by the SFBRWQCB, and **Mitigation Measure 4.8-3** would ensure that no wastewater would be discharged prior to adequate treatment, and the Modified Project's wastewater would not degrade surface water or groundwater quality. Likewise, the use of recycled water for irrigation on the site would be permitted under the State's Water Reclamation Requirements for Recycled Water Use. **Mitigation Measure 4.8-2** would require the

development and implementation of a Demolition and Containment Plan that would minimize the potential for contamination of the Bay from the removal of the petroleum pipeline during pier renovation. As discussed in **Impacts 4.8-1** and **4.8-2**, **Mitigation Measures HYD-1** and **HYD-2** would address any potential impacts to water quality resulting from the construction of the Bay Trail. These permits and plans would ensure that the Modified Project would be operated consistent with Basin Plan water quality objectives. The Modified Project would incorporate LID features to comply with the MRP Provision C.3 treatment requirements. MRP Provision C.3 requires the incorporation of LID features to prevent increases in runoff and pollutant discharges from projects. As a result, there would be no significant decrease in the amount of stormwater recharging to underlying water supplies. The Modified Project would be reviewed by the City Public Works Department to confirm that the Modified Project meets the requirements of the Contra Costa Clean Water Program and the MRP.

While a SGWMP has yet to be developed for the basin, the Project Site is not a source of recharge, and therefore implementation of the Modified Project would not affect groundwater basin levels, integrity, or supply. The Modified Project would be consistent with all existing regional water quality and sustainable groundwater management policies and plans. This is a less-than-significant impact with mitigation.

4.8.5.5 Cumulative Impacts

IMPACT 4.8.6	CUMULATIVE HYDROLOGY AND WATER QUALITY IMPACTS
Significance Before Mitigation	Potentially Significant
Mitigation Measures	Modified Project Mitigation: MM 4.8-1; MM 4.8-2; MM 4.8-3 Bay Trail IS/MND Mitigation: HYD-1; HYD-2
Significance After Mitigation	Less Than Significant
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

The cumulative geographic context for hydrology and water quality for the Modified Project consists of the Project Site and other areas within the watershed north of the border created by Interstate 580 and Potrero Ridge, and associated areas of the East Bay Plain Groundwater Basin, including all cumulative growth therein.

As discussed in **Section 4.8.3.6**, San Francisco Bay and San Pablo Bay are identified as impaired for a broad range of pollutants including dichloro-diphenyl-trichloroethane (DDT), mercury, and PCBs. And as discussed in **Section 4.8.2.2**, salt intrusion, subsidence, and water quality impacts have been identified within the East Bay Plain Groundwater Subbasin. As such, decades of urban, agricultural, and industrial development have resulted in significant cumulative hydrology and water quality impacts to both surface and groundwater.

The Modified Project, in combination with other projects within the watershed, could impact hydrology and water quality. However, as described in the impact discussions above, design measures incorporated into the Modified Project and mitigation measures identified above would avoid or reduce impacts.

With regards to hydrology, the Modified Project would not include groundwater extraction, as water would be provided by EBMUD. Groundwater recharge on the Project Site would be maintained through compliance with MRP Provision C.3 treatment requirements. The intent of the LID features is to retain stormwater onsite and to maintain stable groundwater quantities. Specifically, the drainage control requirements set forth by the MRP and the Contra Costa Clean Water Program address cumulative effects by requiring that stormwater management measures be incorporated into projects to ensure that individual contributions do not become cumulatively considerable. The proposed stormwater system would be designed with centralized stormwater capture facilities and energy dissipaters so that the post-project flow velocities are less than the pre-project flow velocities, and the Modified Project would not alter the course of a stream or river.

With regards to surface water quality, construction of the Modified Project would be conducted under a SWPPP, a Demolition and Containment Plan, CRUP, and a SGWMP. These plans incorporate BMPs that have been demonstrated to be effective at achieving Basin Plan water quality objectives and maintaining beneficial uses. The project-specific BMPs identified in **Mitigation Measure 4.8-1** and **Mitigation Measure 4.8-2**, would reduce runoff from exposed soil, control stormwater runoff, and prohibit the discharge of pollutants to the Bay. Likewise, during operation of the Modified Project, compliance with MRP Provision C.3 treatment requirements would ensure stormwater from the development areas would be routed through treatment ponds prior to discharge to the Bay.

With regards to groundwater quality, implementation of construction related BMPs identified in the SWPPP, Demolition and Containment Plan, CRUP, and SGWMP would ensure that potential pollutants are not allowed to enter the soil or groundwater. Operation of the optional on-site WWTP would be permitted under an individual set of WDRs issued by the SFBRWQCB. Likewise, the use of recycled water for irrigation on the site would be permitted under the State's Water Reclamation Requirements for Recycled Water Use. Furthermore, **Mitigation Measure 4.8-3** would ensure that wastewater is properly treated before being discharge. As discussed in **Impacts 4.8-1** and **4.8-2**, **Mitigation Measures HYD-1** and **HYD-2** would address any potential impacts to water quality resulting from the construction of the Bay Trail. These permits and plans would ensure that the Modified Project would be operated consistent with Basin Plan water quality objectives. These permits would ensure that the Modified Project would be operated consistent with Basin Plan water quality objectives.

In summary, the Modified Project includes water quality BMPs during construction that would ensure that the Modified Project does not make a cumulatively considerable contribution to significant cumulative hydrology and water quality impacts during construction. Likewise, compliance with the MRP Provision C.3 treatment requirements, WDRs and permitting requirements would ensure that the Modified Project does not make a cumulatively considerable contribution to significant cumulative hydrology and water quality impacts during operation. The Modified Project would not compound the impacts of past land uses that have impaired hydrology and water quality in the region. Construction and operation would not contribute to the existing impairments of the Bay as it would not contribute DDT, mercury, PCBs, or other pollutants. Likewise, the Modified Project would not utilize groundwater, reduce groundwater recharge, or

otherwise contribute to impacts in the groundwater basin. Therefore, the Modified Project, combined with other past, present, or reasonably foreseeable future projects described in **Section 5.4**, would not make a cumulatively considerable contribution to a significant cumulative impact. This would result in a less-than-significant cumulative impact with mitigation.

4.8.6 MITIGATION MEASURES

This section includes mitigation measures that reduce environmental impacts of the Modified Project. Mitigation measures that were identified in the 2011 FEIR have been presented in this SEIR as appropriate; however, review of the mitigation measures identified in the 2011 FEIR determined that some measures required revisions or were not applicable to the Modified Project. Additionally, new and more relevant mitigation measures are identified below. **Appendix K** provides a summary of whether each mitigation measure from the 2011 FEIR was revised, deleted, or kept as is and the reasoning for that determination.

MM 4.8-1: The following BMPs shall be included in the SWPPP or SWPPPs prepared for the Modified Project construction in accordance with the Construction General Permit.

1. The construction contractor shall minimize the production of debris when cutting or demolishing portions of the over-water pier components or constructing new over-water components, and shall utilize netting, containment vessels, work platforms, or the equivalent to catch any falling debris.
2. The construction contractor shall install a containment boom around the work area to contain floating debris, and shall provide a vessel to retrieve debris from the containment area at the end of each work day.
3. Straw bales, wattles, fiber rolls, gravel bags, or equivalent devices shall be installed around the perimeter of the pier and stockpiled materials that are exposed to the environment to prevent debris from being transported to the Bay via runoff.
4. The use of hazardous materials during construction shall be minimized to the extent practical, and the amount of hazardous materials stored on the pier or adjacent to the waterfront shall be limited to what is needed to immediately support construction activities. The quantities shall not exceed 55 gallons for a specific material. All hazardous materials shall be stored safely and securely in approved containers, under cover or in an approved storage shed or cabinet, and with adequate secondary containment. Fueling of generators and other equipment shall be conducted away from the pier edge and other locations where a spill could easily enter the Bay, and adequate spill cleanup materials shall be provided during all fueling operations.
5. Well-maintained equipment shall be used to perform the construction work, and, except in the case of a failure or breakdown, equipment maintenance shall be performed offsite. Equipment shall be inspected daily by the operator for leaks or spills. If leaks or spills are encountered, the source of the leak shall be identified, leaked material cleaned up, and the cleaning materials shall be collected and properly disposed of.
6. Inactive material stock piles must be covered and bermed at all times.
7. During the wet season, construction materials, including topsoil, chemicals, and quarried materials transported by barge (regardless of the season) shall be stored, covered, and isolated to prevent runoff losses and contamination of surface and groundwater.

8. Active debris boxes shall be covered during rain events to prevent contact with rainwater.
9. Sanitary facilities shall be provided for construction workers.
10. No concrete shall be stored onsite. After trucks are finished placing concrete, they shall be washed out in a designated area, and the wash water shall be contained within large plastic containers. Once dried, the residual concrete shall be appropriately disposed of offsite.
11. At the end of each work day (at a minimum), the part of the pier deck upon which construction activities have taken place that day shall be cleaned of particulates, sediment, and debris, by manual or mechanical means such as vacuuming or sweeping. Power washing is not an acceptable method for cleaning.
12. Non-stormwater discharges to the Bay shall be prohibited unless specified in the SWPPP and approved by the City and RWQCB.
13. During construction, any barges performing work shall be moored in a position to capture and contain the debris generated during any substructure or in-water work. In the event that debris does reach the Bay, personnel in workboats within the work area shall immediately retrieve the debris for proper handling and disposal. All debris shall be disposed of at an authorized upland disposal site.
14. Construction waste shall be collected and transported to an authorized upland disposal area, per federal, state, and local laws and regulations.
15. All construction material, wastes, debris, sediment, rubbish, trash, fencing, etc., shall be removed from the Project Site once the Modified Project is completed and transported to an authorized disposal area, in compliance with applicable federal, state, and local laws and regulations.
16. Encountered groundwater shall be removed from trenches and excavations in such a manner as to reduce potential contact with construction materials, construction personnel, and surface waters and shall be disposed of at an appropriately permitted facility such as a WWTP in accordance with the requirements of the NPDES permit.
17. Existing vegetation shall be retained where possible. To the extent feasible, grading activities shall be limited to the immediate area required for construction and remediation.
18. Temporary erosion control measures (such as silt fences, fiber rolls, vegetated swales, a velocity dissipation structure, staked straw bales, temporary revegetation, rock bag dams, erosion control blankets, and sediment traps) shall be employed for disturbed areas during the wet season.
19. No disturbed surfaces shall be left without erosion control measures in place during the wet season.
20. Construction area entrances and exits shall be stabilized with crushed aggregate.
21. Sediment shall be retained onsite by a system of sediment basins, traps, or other appropriate measures.
22. A spill prevention and countermeasure plan shall be developed, which identifies proper storage, collection, and disposal measures for potential pollutants (such as fuel, fertilizers, pesticides, etc.) used onsite.
23. Petroleum products shall be stored, handled, used, and disposed of properly in accordance with provisions of the CWA (33 USC § 1251 to 1387).
24. Fuel and vehicle maintenance areas shall be established away from all drainage courses and designed to control runoff. When feasible fueling and vehicle maintenance shall be conducted offsite.
25. Disposal facilities shall be provided for soil wastes, including excess asphalt during construction and demolition.

26. The Applicant shall require all workers be trained in the proper handling, use, cleanup, and disposal of all chemical materials used during construction activities and provide appropriate facilities to store and isolate contaminants.
27. The Applicant shall require all contractors involved in the Modified Project be trained on the potential environmental damages resulting from soil erosion prior to development by conducting a pre-construction conference. Copies of the project Erosion Control Plan (ECP) shall be distributed at this time. All construction bid packages, contracts, plans, and specifications shall contain language that requires adherence to the ECP.
28. Construction activities shall be scheduled to minimize land disturbance during peak runoff periods. Soil conservation practices shall be implemented during the fall or late winter to reduce erosion during spring runoff.
29. Creating construction zones and grading only the minimum required areas at a time shall minimize exposed areas. If possible during the wet season, grading on a particular zone shall be delayed until protective cover is restored on the previously graded zone.
30. Utility installations and decommissioning shall be coordinated to limit the number of excavations.
31. Preserving as much natural cover, topography, and drainage as possible, protect disturbed soils from rainfall during construction. Trees and shrubs shall not be removed unnecessarily.
32. Disturbed areas shall be stabilized as promptly as possible, especially on long or steep slopes. Recommended plant materials and mulches shall be used to establish protective ground cover. Vegetation such as fast-growing annual and perennial grasses shall be used to shield and bind the soil. Mulches and artificial binders shall be used until vegetation is established. Where truck traffic is frequent, gravel approaches shall be used to reduce soil compaction and limit the tracking of sediment. The Modified Project shall use a preponderance of drought resistant species native to the Richmond area in the selection of vegetation, plants, mulches, or other plant material used in re-vegetation or soil stabilization.
33. Surface water runoff shall be controlled by directing flowing water away from critical areas and by reducing runoff velocity. Diversion structures such as terraces, dikes, and ditches shall collect and direct runoff water around vulnerable areas to prepared drainage outlets. Surface roughening, berms, check dams, hay bales, use of permeable paving surfaces or similar measures shall be used to reduce runoff velocity and erosion.
34. Sediment shall be contained when conditions are too extreme for treatment by surface protection. Temporary sediment traps, filter fabric fences, inlet protectors, vegetative filters and buffers, or settling basins shall be used to detain runoff water long enough for sediment particles to settle out.
35. Topsoil removed during construction shall be carefully stored and treated as an important resource. Visqueen plastic and fiber rolls shall be deployed to cover and berm topsoil stockpiles to prevent runoff during storm events.

MM 4.8-2: If the Pier renovation requires the removal or disturbance of the petroleum conveyance pipeline, then the Applicant shall develop and submit to the City for approval a Demolition and Containment Plan that would minimize the potential for contamination of the Bay from the disturbance or removal of the petroleum conveyance pipeline during pier renovation. The Plan must be submitted and approved before any work on the pier begins. The Plan shall include provisions for control of potential releases of piping materials and other materials into the Bay. The Demolition and Containment Plan shall include capture and associated disposal provisions of any residual petroleum products or any other

4.8.6.1 Construction of the Bay Trail

HYD-1	Implement GEO-1 and GEO-2 (refer to Section 4.6.6).
HYD-2	The Lead Agency shall obtain permits from RWQCB to ensure compliance with CWA Section 401.

4.9 LAND USE AND PLANNING

4.9.1 INTRODUCTION

This section provides a description of land use and planning conditions in the Point Molate Site (Project Site) and describes the changes to those conditions that would result from implementation of the Point Molate Mixed-Use Development Project (Modified Project). Following an overview of the relevant regulatory setting in **Section 4.9.2** and the environmental setting in **Section 4.9.3**, project-related impacts and mitigation measures are presented in **Section 4.9.5** and **Section 4.9.6**, respectively. The impacts in regards to land use and planning associated with the Casino Project and analyzed as Alternative A in the *Final Environmental Impact Report for the Point Molate Mixed-Use Tribal Destination Resort and Casino Project* (2011 FEIR) are also summarized in **Section 4.9.4** and compared to the impacts of the Modified Project.

4.9.2 REGULATORY SETTING

4.9.2.1 Federal

Coastal Zone Management Act

Resources along U.S. coastlines are protected by the federal Coastal Zone Management Act (CZMA), which is administered nationally by the National Oceanic and Atmospheric Administration and in California by the California Coastal Commission (Commission), except for the San Francisco Bay (Bay), where the Bay Conservation and Development Commission (BCDC) oversees development. The role of the BCDC is discussed below.

4.9.2.2 State

California State Lands Commission

The State Lands Commission (SLC) retains jurisdiction over all tidelands and submerged lands owned by the State of California. These lands are required to be used for purposes consistent with public trust (e.g., maritime commerce, navigation, fishing, environmental, and recreational purposes), and a lease or permit is required for using or constructing any type of structure on lands under the jurisdiction of the SLC. Within the Project Site, all tidelands and submerged lands, defined as the land along the shoreline below the mean high tide line, are subject to SLC public trust jurisdiction (State Lands Commission, 2019).

4.9.2.3 Local

San Francisco Bay Conservation and Development Commission

The BCDC was established by the McAteer-Petris Act to prepare a plan for the long-term use and preservation of the Bay. Pursuant to the McAteer-Petris Act, the BCDC drafted the San Francisco Bay Plan (Bay Plan) to guide development in the San Francisco Bay Area (Bay Area) to protect the Bay and its natural resources.

San Francisco Bay Plan

The Bay Plan contains information that describes the values associated with the San Francisco Bay, policies regarding future uses of the Bay and shoreline, and maps that direct the protection and development of the Bay and its tributary waterways, marshes, managed wetlands, salt ponds, and shoreline in accordance with these policies. **Figure 4.9-1** shows the Bay Plan Map No. 4 priority use designation for the Project Site as Waterfront Park, Beach, and Scenic Drive (Stenmark Drive). As noted in the Bay Plan, all of the policies listed in conjunction with the Bay Plan Maps are “enforceable policies and have the same authority as the policies in the text of the Bay Plan” (BCDC, 2019). The Bay Plan policies presented in conjunction with Plan Map No. 4 that are relevant to development on the Project Site are provided below.

Plan Map 4 Bay Plan Policy 7 - Former Naval Fuel Depot Point Molate

Develop for park use. Landward of Western Drive should be developed consistent with Recreation Policy 4-b. Provide trail system linking shoreline park areas and vista points in hillside open space areas. Provide public access to historical district with interpretation of this resource. The Point Molate Pier should be re-used for water-oriented recreation and incidental commercial recreation. Encourage water-oriented recreation, including mooring facilities for transient recreational boats, excursion craft, and small watercraft. Protect existing eelgrass beds.

In addition, the following Recreation Policies are relevant to development on the Project Site.

Recreation Policy No. 4-a - In waterfront park.

1. Where possible, parks should provide some camping facilities accessible only by boat, and docking and picnic facilities for boaters.
2. To capitalize on the attractiveness of their Bayfront location, parks should emphasize hiking; bicycling; riding trails; picnic facilities; swimming; environmental, historical, and cultural education and interpretation; viewpoints; beaches; and fishing facilities. Recreational facilities that do not need a waterfront location, e.g., golf courses and playing fields, should generally be placed inland, but may be permitted in shoreline areas if they are part of a park complex that is primarily devoted to water-oriented uses, or are designed to provide for passive use and enjoyment of the Bay when not being used for sports.
3. Where shoreline open space includes areas used for hunting water fowl, public areas for launching non-motorized small boats should be provided so long as they do not result in overuse of the hunting area.
4. Public launching facilities for a variety of boats and other water-oriented recreational craft, such as kayaks, canoes, and sailboards, should be provided in waterfront parks where feasible.
5. Except as may be approved pursuant to Recreation Policy 4-b, limited commercial recreation facilities, such as small restaurants, should be permitted within waterfront parks provided they are clearly incidental to the park use, are in keeping with the basic character of the park, and do not obstruct public access to and enjoyment of the Bay. Limited commercial development may be appropriate (at the option of the park agency responsible) in all parks shown on the Plan maps except where there is a specific note to the contrary.

6. Trails that can be used as components of the San Francisco Bay Trail [Bay Trail], the Bay Area Ridge Trail, or links between them should be developed in waterfront parks. Bay Trail segments should be located near the shoreline unless that alignment would have significant adverse effects on Bay resources; in this case, an alignment as near to the shore as possible, consistent with Bay resource protection, should be provided. Bay Area Ridge Trail segments should be developed in waterfront parks where the ridgeline is close to the Bay shoreline.
7. Bus stops, kiosks, and other facilities to accommodate public transit should be provided in waterfront parks to the maximum extent feasible. Public parking should be provided in a manner that does not diminish the park-like character of the site. Traffic demand management strategies and alternative transportation systems should be developed where appropriate to minimize the need for large parking lots and to ensure parking for recreation uses is sufficient.
8. Interpretive information describing natural, historical, and cultural resources should be provided in waterfront parks where feasible.
9. In waterfront parks that serve as gateways to wildlife refuges, interpretive materials and programs that inform visitors about the wildlife and habitat values present should be provided. Instructional materials should include information about the potential for adverse impacts on wildlife, plant, and habitat resources from certain activities.
10. The Commission may permit the placement of public utilities and services, such as underground sewer lines and power cables, in recreational facilities provided they would be unobtrusive, would not permanently disrupt use of the site for recreation, and would not detract from the visual character of the site.

Recreation Policy No. 4-b,c - In waterfront parks and wildlife refuges with historic buildings.

Historic buildings in waterfront parks and wildlife refuges should be developed and managed for recreation uses to the maximum practicable extent consistent with the Bay Plan Map policies and all of the following.

1. Physical and visual access corridors between inland public areas, vista points and the shoreline should be created, preserved, or enhanced. Corridors for Bay-related wildlife should also be created, preserved, and enhanced where needed and feasible.
2. Historic structures and districts listed on the National Register of Historic Properties (NRHP) or California Registered Historic Landmarks should be preserved consistent with applicable state and federal historic preservation law and should be used consistent with the Bay Plan recreation policies. Public access to the exterior of these structures should be provided. Public access to the interiors of these structures should be provided where appropriate.
3. To assist in generating the revenue needed to preserve historic structures and develop, operate, and maintain park improvements and to achieve other important public objectives, uses other than water-oriented recreation, commercial recreation, and public assembly facilities may be authorized only if they would: (a) not diminish recreational opportunities or the park-like character of the site; (b) preserve historic buildings where present for compatible new uses; and (c) not significantly, adversely affect the fish, other aquatic life, and wildlife and their habitats at the site.

Public Trust Policy No. 1

When the Commission takes any action affecting lands subject to the public trust, it should ensure that the action is consistent with the public trust needs for the area and, in case of lands subject to legislative grants, should also ensure that the terms of the grant are satisfied and the project is in furtherance of state-wide purposes.

Permitting

It is necessary to obtain a BCDC permit prior to undertaking work in the Bay or within 100 feet of the shoreline, including filling, dredging, disposing of dredged sediment, developing the shoreline, and other work. The McAteer-Petris Act specifies that outside of the area under BCDC's jurisdiction, where permits for development are not required from the BCDC, the Bay Plan provisions are advisory only.

Association of Bay Area Governments

The Association of Bay Area Governments (ABAG) is the public agency overseeing the Bay Trail Project, adopted in July 1989, through the enactment of Senate Bill (SB) 100 (1987). The legislation requires ABAG to “develop a plan for this regional trail system including a specific alignment for the Bay Trail” (ABAG, 2019). SB 100 also requires that the plan include specific routes for a biking and hiking trail within a specified proximity to recreational facilities and provide links between existing and proposed public transportation routes. The Bay Trail Plan proposes that the trail follow the western shoreline along the San Pablo Peninsula and around the northern tip to the San Pablo Yacht Harbor, including a 1.5-mile segment along the Bay shore of the Project Site. This Modified Project is implementing the construction of this 1.5-mile Bay Trail segment. This segment is part of a 2-5-mile San Francisco Bay Trail project, which the EBRPD approved based on an IS/MND in 2018.

Plan Bay Area

The Metropolitan Transportation Commission, along with ABAG, produces the Plan Bay Area which is the Bay Area's Sustainable Communities Strategy pursuant to SB 375. The purpose of Plan Bay Area is to provide a sustainable, long-term plan that ties transportation funding with land use planning to reduce greenhouse gas (GHG) emissions. To that end, it designates Priority Development Areas within an existing community, which must be within one half-mile of frequent transit, or in an area planned for future housing or job growth (Metropolitan Transportation Commission and ABAG, 2017).

Plan Bay Area 2040, the most recent update, was published on September 27, 2017 as a supplemental report to the 2013 Plan Bay Area. Plan Bay Area 2040 does not designate the Project Site as a Priority Development Area or a Transit Priority Area. The Project Site also is not a Priority Conservation Area, but the Priority Conservation Area Map identifies three features on the Project Site: (1) the Bay Trail, (2) a regional trail system (East Bay Regional Parks District) gap, and (3) a water trail. For a discussion of project-related GHG emissions and the Plan Bay Area 2040, please refer to **Section 4.2**.

East Bay Regional Park District Master Plan 2013

The East Bay Regional Park District (EBRPD) is responsible for the development and operation of a regional park system in the East Bay. The most recent EBRPD Existing and Potential Parklands and Trails map, dated October 2013, marked the Project Site as Potential EBRPD Parkland. The EBRPD supports the Bay Trail Plan, with a desired alignment along the western shoreline of the Project Site,

following an existing railroad right-of-way that would continue north to the San Pablo Yacht Harbor (EBRPD, 2019a). EBRPD currently has no jurisdiction over the Modified Project nor the Project Site.

City of Richmond General Plan 2030

City of Richmond General Plan 2030 Change Area Districts

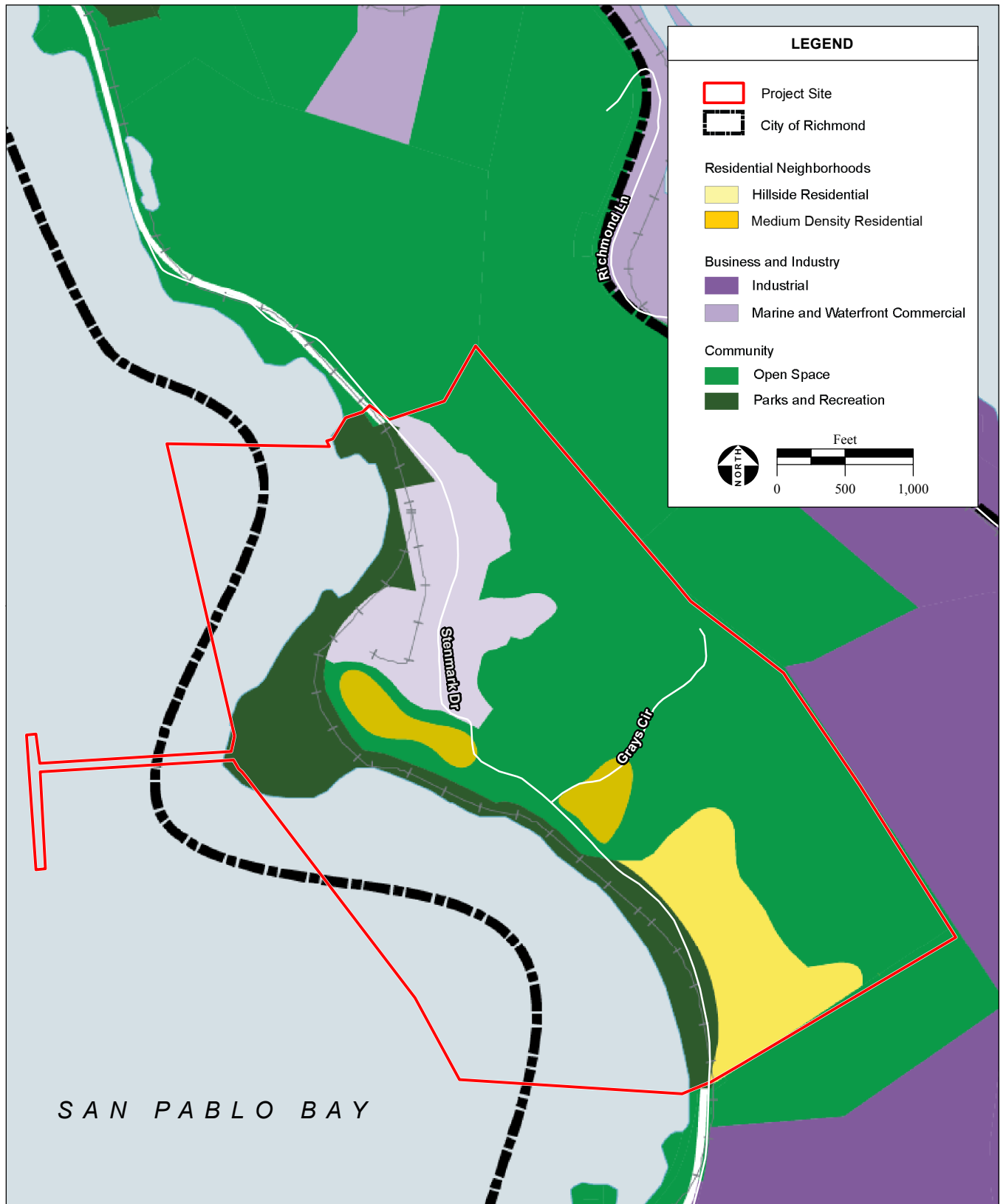
The City of Richmond's (City) General Plan 2030 (General Plan) Land Use Element identifies Change Areas, which the General Plan defines as areas "in which new uses, development, and redevelopment are anticipated." The Project Site is located in the Point Molate Naval Fuel Depot (NFD) area within the San Pablo Peninsula Area, which is identified as Change Area 13 (CA-13). The land uses designated within the Change Area are shown in **Figure 4.9-2**. The General Plan Land Use and Urban Design Element describes the "desired urban form" for this Change Area as follows. General Plan goals and policies implement the "desired urban form."

"In the former Point Molate Navy Fuel Depot area, improvements to public areas should be guided, for the most part, by the 1997 Point Molate Reuse Plan [Reuse Plan], except any references encouraging the demolition of Building 6. In general, improvements to public areas should connect the varied open and built spaces through a new network of intimate curvilinear streets and pedestrian and bicycle paths. Where possible, these new connections should build upon existing underutilized paths to minimize impacts on the natural environment. Connections should emphasize pedestrian and bicycle access along shared roadways and trails. Natural sanctuaries including the many groves of trees should remain undisturbed and become part of a larger open space preserve. Public gathering spaces should be provided at major destinations such as vista points and trailheads to further accentuate the unique natural environment. New landscaping should integrate the existing native planting palette with the peninsula's unique character.

In the former Point Molate Navy Fuel Depot area, adaptive reuse of historic buildings and new development should seek to reinforce the original rural village character of the area. New buildings should keep a small-scale to reinforce the sense of a hillside town. In general, variety of building uses are encouraged in the private areas including entertainment, lodging and waterfront commercial. All development should respect the natural topographic context. New buildings should blend into the natural and cultural landscape. Sustainable design practices and elements should be an intrinsic part of new buildings" (City of Richmond, 2012).

City of Richmond General Plan Land Use

The General Plan was adopted in 2012 and provides a framework for growth and development in the City. The General Plan land use classifications establish allowed uses within specific areas of the City. The Project Site has the following General Plan Land Use Element designations: Business/Light Industrial, Open Space, Parks and Recreation, Hillside Residential,



SOURCE: City of Richmond, 2018; DigitalGlobe aerial photograph, 8/31/2017; AES, 10/3/2019

Point Molate Mixed-Use Development SEIR / 216544 ■

Figure 4.9-2
City of Richmond Change Area 13 San Pablo Peninsula

and Medium-Density Residential.

City of Richmond General Plan Land Use

The General Plan was adopted in 2012 and provides a framework for growth and development in the City. The General Plan land use classifications establish allowed uses within specific areas of the City. The Project Site has the following General Plan Land Use Element designations: Business/Light Industrial, Open Space, Parks and Recreation, Hillside Residential, and Medium-Density Residential. These land use designations are defined below and shown in **Figure 3-4**.

- **Hillside Residential.** Hillside Residential includes attached and detached single-family housing on subdivided parcels and clustered multi-family residential on developable portions of hillside parcels below the 400-foot elevation. Hillside development should address key environmental challenges and constraints such as steep slopes and soil erosion. Neighborhood mixed-use development is allowed at neighborhood nodes (City of Richmond, 2012).
- **Medium-Density Residential.** Medium-Density Residential includes single- and multi-family housing types such as one to three-story garden apartments, historic bungalows and cottages on small lots, townhouses, and stacked flats. Neighborhood mixed-use development is allowed at neighborhood nodes (City of Richmond, 2012).

The General Plan includes the following additional land use designations that are not present on the Project Site but are proposed to be applied to the Project Site as a part of the Modified Project.

- **Medium-Intensity Mixed Use (Community Nodes and Gateways).** Medium-Intensity Mixed Use (Community Nodes and Gateways) includes mid-rise mixed-use development at key community nodes and gateways with commercial uses strongly encouraged at street-level. Commercial development must have a pedestrian-oriented building design with setbacks allowing for public amenities and parking located behind buildings.
- **Low-Density Residential.** Low-Density Residential Includes attached and detached single-family residential development in level to moderately sloped areas. Neighborhood mixed-use development is allowed at neighborhood nodes. Existing multi-family residential structures may remain and may be improved without increasing densities, or may revert to single-family residential uses.

City of Richmond General Plan 2030 Land Use Element Policies

The General Plan provides specific planning goals and policies to guide development within the City. Key goals and policies that are applicable to development of the Project Site include the following.

GOAL LU1	An Improved Urban Environment Improve the urban fabric by crafting development strategies that emphasize high-density, mixed-use infill development and a safe, vibrant, economically-sustainable environment that takes advantage of existing infrastructure and public facilities. Provide improvements that strengthen connections between neighborhoods and amenities such as retail, community facilities, parks and open space areas.
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Focus area-specific revitalization endeavors on:

- Improving the Downtown/Macdonald Avenue and Civic Center area as a social, cultural and civic destination;
- Developing the Southern Shoreline, Ford Peninsula in Marina Bay and San Pablo Peninsula as regional and recreational destinations;
- Developing the Hilltop Area as a thriving, mixed-use regional destination;
- Promoting the Richmond Parkway as a new employment center and key mixed-use corridor;
- Revitalizing key commercial corridors as vibrant, mixed-use streets; and
- Strengthening central residential areas with neighborhood nodes and improved connectivity.

Policy LU1.1 ***Higher-Density and Infill Mixed-Use Development.*** Provide higher-density and infill mixed-use development affordable to all incomes on vacant and underutilized parcels throughout the City. Ensure efficient use of land and existing circulation infrastructure by:

- promoting higher-density, transit-oriented, and pedestrian-friendly development along key commercial corridors and key intersections (community nodes and gateways); and by supporting local-serving commercial activities in residential areas to provide needed services and amenities close to where people live and work.

GOAL LU2 ***Healthy and Viable Neighborhoods.*** Creating healthy and viable neighborhoods that provide safe places for people of all ages, ethnicities and abilities to live, work and play. Equitably distribute community facilities, urban parks and small public gathering areas to provide all residents with opportunities to enjoy the benefits of a rich social and physical environment. Further support residents' daily needs requiring small-scale local retail and other neighborhood-supporting uses within walking distance of homes. Encourage development of neighborhood nodes that increase convenient access to local services and amenities.

Policy LU2.1 ***Mixed-Income and Integrated Neighborhoods.*** Promote mixed-income development and inclusion of affordable housing units in all neighborhoods. Encourage the integration of market rate housing with affordable units at both the project and neighborhood levels. Affordable housing units should be located close to community and retail amenities such as parks, full-service grocery stores, local public transit stops, retail, and public services.

Policy LU2.2 ***Compact Walkable Neighborhoods and Livable Streets.*** Promote safe and walkable neighborhoods and interconnected streets through the design of streetscapes, public gathering places, and all types of physical development. Provide pedestrian amenities such as sidewalks and street trees, transit and bike improvements, lighting and landscaping, and appropriate traffic calming measures to ensure a safe pedestrian environment.

Support uses and public space improvements that generate street-level activity, create eyes-on-the-street, provide opportunities for community interaction, and encourage a sense of collective ownership of common areas. Encourage mixed-use development that attracts people and facilitates activity throughout the day. Prohibit isolated or gated communities in order to improve physical connectivity throughout the City, and create incentives to remove barriers in existing gated areas. Maintain streets to ensure that neighborhoods and streets are safe and well used.

Policy LU2.4 ***Equitable Distribution and Access.*** Continue to promote equitable distribution of community facilities and infrastructure. Community facilities should continue to be located near residents in order to serve as neighborhood centers and maximize use. As the City grows, facilities will be sited to accommodate current and future residents. Prioritize the development of new, upgraded, or revitalized parks; community facilities such as libraries, medical centers, and schools; circulation and safety improvements; and infrastructure in neighborhoods that are currently underserved, have a high proportion of low-income households, and are impacted due to high crime and physical blight. Tailor improvements to the specific needs of residents in these neighborhoods.

GOAL LU3 ***Expanded Economic Opportunities.*** Expand economic opportunities in existing commercial and industrial areas and develop new opportunities to diversify the local economy. Create an attractive and socially-responsible business environment that will support business recruitment, expansion and retention. Encourage innovative, high-growth and green business, and further support businesses and industries in providing a range of job and entrepreneurial opportunities while minimizing environmental and health impacts.

In building a thriving local economy, develop a skilled and educated workforce that can strengthen existing businesses and emerging industries. Establish Richmond as a major employment center in Contra Costa County and along the Interstate 80 and 580 corridors by expanding and diversifying the local employment base.

Capitalize on Richmond's amenities and convenient location in order to attract new businesses to the Southern Shoreline, Hilltop, Downtown, the Port and surrounding industrial areas. Transform the Hilltop Area, the Southern Shoreline and the Richmond Parkway as mixed-use regional destinations and employment centers. Leverage Richmond's rich cultural, historical and natural amenities to ignite a vibrant cultural-heritage and tourism industry.

Policy LU3.3 ***Recreation and Tourism Industry.*** Support the emerging recreation and tourism economy by protecting, enhancing, and showcasing the natural, cultural, and historic resources and assets. Encourage the creation of tourist-serving amenities and infrastructure in key areas such as Southern Shoreline, Point Molate, and Downtown, and enhance amenities in existing tourist destinations such as Point Richmond. Expand and complete the Bay Trail to enhance regional connections with shoreline in

the City. Support the development of the southern shoreline as the “Richmond cultural heritage shoreline” to promote economic development in the City while protecting historic and cultural resources and providing opportunities for interpretation, education, and recreation.

Policy LU3.4 ***Efficient and Productive Use of Land.*** Promote the efficient and productive use of industrial and commercial land resources to maximize jobs and revenue. Encourage the reuse of underutilized vacant or blighted sites that may impact the viability of surrounding uses. Prioritize public investment in catalytic projects in major city centers such as Downtown, Hilltop, and the Ford Peninsula in Marina Bay and the entire Southern Shoreline Area. Support the transformation of the Richmond Port into a 21st century modern business. Ensure that all planning and development efforts prioritize the needs of the local community and provide access and benefits for City residents. This includes job creation and training, and access to recreation amenities and open space.

GOAL LU4 ***Enhanced Environmental Quality.*** Protect and preserve natural resources to nurture environmental and human health. Work with local and regional regulating bodies to protect water quality in creeks and bays, and to reduce or mitigate air, water and soil pollution and contamination. Encourages the sensitive integration of built and natural environments to develop a high-quality urban experience.

Policy LU4.1 ***Richmond Shoreline.*** Minimize the impacts of development on the shoreline with special attention to intensity, density, and proximity to the water. Conserve, protect, and enhance natural and cultural resources along the shoreline in the City. Promote a balance of uses along the shoreline that support multiple community needs such as economic development, job creation, renewable energy generation, recreation, historic preservation, and natural resource protection.

- Provide a mix of residential and recreational uses in the Southern Gateway change area; support an active industrial waterfront around the Port and along the Santa Fe Channel; and promote a cultural heritage shoreline west of the Port.
- Protect and restore wetlands, native habitats, and open space; develop shoreline parks and trails to increase public access; encourage industrial agriculture, recreation, and tourism activities, all subject to standards to ensure land use compatibility; and enhance and showcase historic and cultural resources. Prepare, adopt, and implement plans that will protect natural and built environments from adverse potential impacts of sea level rise due to climate change.

Policy LU4.2 ***Open Space and Conservation Areas.*** Preserve open space areas along the shoreline, creeks, and in the hills to protect natural habitat. Maintain the integrity of hillsides, creeks, and wetlands. Protect existing open space, agricultural lands, and parks.

Policy LU4.4 **Toxic and Contaminated Sites.** Continue to work with the appropriate local, state, and federal agencies to promote the cleanup and reuse of contaminated sites to protect human and environmental health. Work with property owners and regional agencies to prevent, reduce, or eliminate soil and water contamination from industrial operations, the Port, and other activities that use, produce, or dispose of hazardous or toxic substances. Implement appropriate mitigation measures and cleanup of sites that are known to contain toxic materials as a condition of reuse. Support the remediation and reuse of large, disturbed sites, such as the Winehaven complex at Point Molate and the Terminal 4 site at Point San Pablo, into mixed-use centers that provide the maximum benefit to the community without compromising the integrity of the surrounding natural areas.

GOAL LU5 **Balanced and Compatible Uses.** Achieve a mix of land uses that is ecologically, economically and socially equitable and sustainable. Encourages a mix of uses in major activity centers, community nodes and gateways, in neighborhood nodes and along key corridors as well as in some industrial areas. Using this pattern and range of land uses, activate focal areas of the City throughout the day and evening, and provide convenient access to goods, services and community amenities.

Policy LU5.1 **A Balanced Mix of Land Uses.** Promote a balanced mix of uses in major activity centers, community nodes, and gateways, in neighborhood nodes (corner commercial clusters), and along key corridors as well as in industrial areas. Uses may include diverse housing options, office, civic, commercial, retail, and parks and open space.

In residential areas, the re-establishment of neighborhood nodes allows for walkable access to neighborhood retail, services, public parks, and other neighborhood amenities that support the daily needs of residents.

A mix of uses such as business, residential, light industrial, waterfront commercial, and open space will enhance economic vitality and provide the flexibility needed to adapt to changing economic conditions. Along the shoreline in the City, diverse uses should balance community needs for recreation, interpretation, conservation, and historic and cultural preservation with economic development opportunities.

Policy LU5.2 **A Mixed-Use Waterfront.** Continue to create a dynamic mixed-use waterfront that includes amenities and attractions for residents and visitors. There are a number of different uses, features, and assets along the shoreline in the City that can be enhanced to create a series of distinct places along the waterfront.

The San Pablo Peninsula is characterized by large natural open spaces, shoreline parks and beaches, sweeping views of the Bay Area, and historic structures. The City will support development on the Peninsula as a regional recreation destination that is well connected to rest of the City and accessible to the greater community. Disturbed

sites such as the Winehaven complex at Point Molate and the Terminal 4 site at Point San Pablo will be remediated and redeveloped into mixed-use activity centers to serve a broad range of visitors and provide long-term revenue to the City.

Policy LU5.3

Land Use Compatibility. Minimize conflicts between land uses to protect wetlands, marshlands, and creeks, promote human and environmental health and safety, preserve community character, and retain job-generating activities that have long-term viability. Types, intensities, and ranges of use and development should be compatible with existing uses and should minimize or eliminate conflicts that adversely impact wetlands, marshlands, creeks, mudflats, public safety, human or environmental health, or could generate nuisances. All new development must avoid or mitigate to the greatest extent feasible potential negative impacts such as noise, odors, and pollution.

New development should complement the character and scale of existing neighborhoods, cultural resources, historic structures, and landscapes. In particular, existing industrial and residential uses can successfully coexist through well-conceived circulation and urban design strategies including buffers (which may be in the form of sound walls and/or enclosed buildings and appropriate transitional habitat zones between wetlands, marshlands, creeks, and mudflats) and transitional uses, rerouting of truck traffic, and design components that mark transitions in land use. Similar to other cities that host mixed uses, consider requiring land use covenants for new development in areas where new uses may generate a perception of conflict with existing uses. Require sufficient visual open space and/or landscaped screening between industrial operations and adjacent residential or recreational activities in order to create adequate buffers.

GOAL LU6

High-Quality and Sustainable Development. Maintain a high standard of design, planning and construction of new and renovated public and private facilities, infrastructure and services. Continue committing to a comprehensive planning approach that supports a sustainable and healthy community and reduces impacts on the natural environment. Provide new development near transit and in areas with existing transportation infrastructure. Activate public areas and reduce the need for residents and employees to travel by automobile to access daily goods by promoting the location of housing, jobs and recreation uses close to transit lines, bicycle routes and pedestrian improvements. In support of a walkable and vibrant community, develop complete mixed-use streets that are safe for pedestrians, bicyclists and all modes of travel.

Policy LU6.2

Complete Streets. Promote mixed-use urban streets that balance public transit, walking, and bicycling with other modes of travel. Support pedestrian and bicycle connectivity by restoring and reinforcing Richmond's grid-based network of streets with landscaping and amenities for transit, bicycles, pedestrians, and people with disabilities. Establish a process for modifying streets to support various modes of

travel. Prohibit future construction of projects with long block lengths, cul-de-sacs, and gated streets.

Policy LU6.4 Long-Term Environmental Sustainability. Promote development standards and land use patterns that encourage long-term sustainability. Support the restoration of natural features such as creeks and wetlands in urban areas and existing neighborhoods as a means of connecting residents with nature and reversing damage to natural systems. Promote landscaping that incorporates native, drought-tolerant plants and sustainable maintenance practices and standards. Provide trees on residential and mixed-use streets and green infrastructure to reduce stormwater runoff. Encourage compact development close to amenities and green buildings to reduce energy use.

City of Richmond Zoning and Subdivision Regulations

The Zoning and Subdivision Regulations of the City are provided in Article XV of the Richmond Municipal Code that implements the General Plan. It contains the following four types of zoning regulations that control the use and development of properties within the City (City of Richmond, 2016b).

- **Land Use Regulations** specify land uses permitted or conditionally permitted in each zoning district, and include special requirements, if any, applicable to specific uses.
- **Development Regulations** control the height, bulk, location, and appearance of structures on development sites. These regulations also include special requirements for second dwelling units, inclusionary housing requirements, landscape and fencing standards, parking and loading requirements, and provisions for the storage of hazardous materials.
- **Administrative Regulations** contain detailed procedures for the administration of zoning regulations, including requirements for use permits and variances; design review; public hearings on ordinance and map amendment; appeals of zoning decisions; nonconforming uses and structures; official plan lines; lot line adjustments; certificates of occupancy; miscellaneous provisions; and enforcement.
- **General Terms and Use Classifications** provide a list of terms and definitions of the terms used in the Zoning and Subdivision Regulations.

Zoning Designations

The Project Site is within an Interim Study Overlay District. The purpose of Interim Study Overlay Districts is to allow local governments discretionary review of development proposals in areas where changes in zoning regulations are contemplated or under study (City of Richmond, 2016b). As shown in **Figure 3-5**, the Project Site is zoned as General Commercial (CG); Industrial, Light (IL); Multi-Family Residential (RM1); Single-Family Hillside Residential (RH); Open Space (OS); and Parks and Recreation (PR). The Project Site includes residential zoning and is thus required to follow the City's Inclusionary Housing Ordinance, Zoning Ordinance § 5.04.810.060, as described in **Section 4.11.2**. The zoning districts currently applied to the Project Site are described in the Zoning and Subdivision Regulations (City of Richmond, 2016b) as follows.

- **General Commercial.** The CG district is intended to accommodate retail, service, office, research and development, and limited industrial uses that are not compatible with mixed-use development. This district offers maximum flexibility to allow the market to determine the mixture of non-residential uses. No residential uses are allowed.
- **Industrial Light.** The IL district is intended to accommodate a diverse range of light industrial uses, including general service, research and development, warehousing, and service commercial uses. This district includes industrial complexes, flex space, and industrial buildings for single or multiple users, warehouses, mini-storage, wholesale, commercial recreation, and other related uses. This district permits a higher development intensity than the Limited Industrial, Light district. Small-scale retail and ancillary office uses are also permitted.
- **Medium-Density Multi-Family Residential.** The RM1 district is intended for single and multi-family housing types such as one to three-story garden apartments, historic bungalows and cottages on small lots, townhouses, and stacked flats. A maximum density of 26 dwelling units per acre is permitted, and a minimum density of 10 dwelling units per acre is required. In addition to residential uses, this district allows for a limited number of public and semipublic uses such as day care centers, public safety facilities, and residential care facilities that are appropriate in a medium-density multi-family residential environment. Neighborhood mixed-use development is allowed at neighborhood nodes identified by the City Planning Commission. Small lot single-unit and bungalow court development is allowed in the RM1 District where it would be compatible with the surrounding neighborhood.
- **Single-Family Hillside Residential.** The RH district is intended for residential development comprised of single-family housing on developable portions of hillside lots below the 400-foot elevation. Development in this district must address key environmental challenges and constraints, such as steep slopes and soil erosion. Standards will ensure that development is compatible with hillside conditions and a rural environment. Minimum lot size for this designation is 11,000 square feet, which may be reduced with clustered development.
- **Open Space.** The OS District is composed of land for development of open space uses consistent with the General Plan. More specifically, this zoning district is intended for undeveloped publicly owned lands, visually significant open lands, water areas, and wildlife habitat. These areas are set aside as permanent open space preserves and may include trails, trail heads, agricultural uses, and other facilities for low-impact public recreational uses. This zoning district includes wetlands, mudflats, creek corridors, and other natural preservation areas, as well as private lands deed-restricted for open space preservation.
- **Parks and Recreation.** The PR District is intended for active and passive public parks, including outdoor and indoor recreation such as playing fields, playgrounds, community centers, and other appropriate recreational uses. This district includes publicly owned local and regional parks as well as privately owned recreational facilities such as golf courses.

The Zoning Ordinance also describes the Planned Area (PA) District that is proposed for the Project Site as a part of the Modified Project.

- **Planned Area.** The PA District is intended for comprehensive development of large areas that complies with the General Plan. A public hearing before City Planning Commission and City Council review is required for the PA District to be adopted to ensure the PA District has the required content and findings. Required Findings include the following.

- The proposed development is consistent with the General Plan, including the height, density, and intensity limitations that apply unless these limitations are to be amended.
- The subject site is physically suitable for the type and intensity of the land use being proposed.
- Adequate transportation facilities and public services, as defined in the General Plan and in the design standards established in the Subdivision Regulations exist or will be provided in accordance with the conditions of PA Plan approval to serve the proposed development; and the approval of the proposed development will not result in a reduction of transportation service for all modes of travel or public services so as to be a detriment to public health, safety, or welfare.
- The proposed development will not have a substantial adverse effect on surrounding land uses and will be compatible with the existing and planned land use character of the surrounding area.
- The development generally complies with applicable design guidelines.
- The proposed development is demonstratively superior to the development that could occur under the standards applicable to the underlying base district, and will achieve superior community design, environmental preservation, and/or substantial public benefit.

Surrounding Zoning Designations

The zoning designations of the lands surrounding the Project Site include OS (described above) as well as General Industrial (IG) and Coastal Commercial (CC) (**Figure 3-5**). The IG and CC districts are described in the Zoning and Subdivision Regulations (City of Richmond, 2016b) as follows.

- **General Industrial.** The IG district is intended to accommodate the broadest range of industrial uses. It includes industrial buildings and complexes, oil and gas refining and distribution, marine services, flex space, warehouses, manufacturing and assembly, and other uses that require large, warehouse-style buildings with flexible floor plans or space for outdoor facilities. Ancillary office uses are also permitted.
- **Coastal Commercial.** The CC district is intended to provide areas for waterfront-related retail and service uses in building forms appropriately scaled to the Bayfront. Shoreline access for the public must be provided. Residential uses are not allowed.

City of Richmond Point Molate Reuse Plan

Following the closure of the NFD in 1995, the City adopted the Reuse Plan to serve as the guide for the reuse and development of Point Molate. The Reuse Plan presents development goals and objectives that focus on balancing economic development with community needs (Appendix D of the 2011 FEIR). The Reuse Plan identifies seven distinct land use areas that are depicted on **Figure 4.9-3**.

- Winehaven Historic District (Historic District)
- Northern Development Area
- Central Development Area
- Southern Development Area
- Shoreline Open Space
- Hillside Open Space

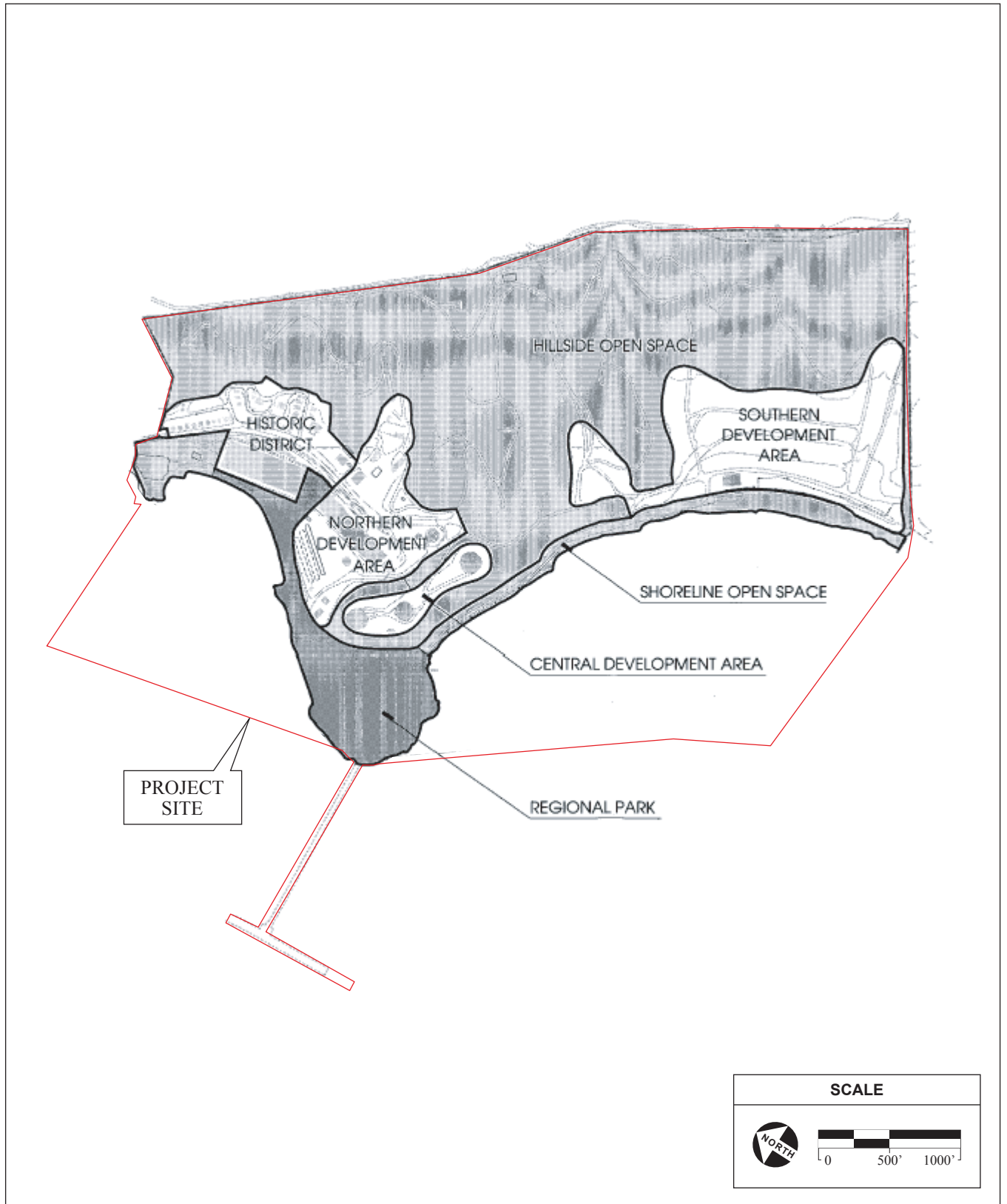


Figure 4.9-3
Base Reuse Plan Development Areas

- Regional Park

The Reuse Plan identified development potential by area as summarized in **Table 4.9-1**.

TABLE 4.9-1
POINT MOLATE REUSE CONSIDERATIONS BY DEVELOPMENT AREA

Development Area	Proposed Reuse Potential
Historic District	<ul style="list-style-type: none"> ▪ On-site cottages as retreat overnight facilities, a bed and breakfast, or similar use. Building No. 1 most suitable as a winery. ▪ Building No. 10 to be used for support functions. ▪ Fire Department would be operational.
Northern Development Area	<ul style="list-style-type: none"> ▪ Educational training and facilities. ▪ Retreat facilities including conference centers, a small hotel, or a bed and breakfast; A small-scale amphitheater. ▪ Area between Building No. 6 (considered for demolition) and shoreline developed for light industrial or educational uses. ▪ If no light industrial development, residential development should occur.
Central Development Area	<ul style="list-style-type: none"> ▪ High-end residential use.
Southern Development Area	<ul style="list-style-type: none"> ▪ Single-and multi-family residential use. ▪ If Building No. 6 were demolished and residential development were to occur onsite, then this area should be used for light industrial uses.
Shoreline Park, Hillside Open Space, and Regional Park Areas	<ul style="list-style-type: none"> ▪ Bay Trail along shoreline. ▪ Secondary trail on top of existing elevated berm through the Point Molate Beach Park. ▪ Potential for outdoor amphitheater. ▪ On-site park with interpretive component. ▪ Building No 132 - supportive uses for the park or commercial recreation purposes. ▪ Ferry and private boat access is encouraged. The development of a waterfront hotel is considered appropriate.
Source: Appendix D of the 2011 FEIR.	

4.9.3 ENVIRONMENTAL SETTING

Information provided in this section is derived from a number of sources including the Reuse Plan (Appendix D of the 2011 FEIR), General Plan, and the 2011 FEIR. This analysis focuses on the manner in which development could alter the Project Site under baseline conditions, which are defined for the purposes of the analysis in this section as physical conditions on or around the publication of the Notice of Preparation (NOP) in July 2019.

4.9.3.1 Former and Existing Uses of the Project Site

The Project Site has a long history of uses, including use by Native Americans (estimated to begin use sometime between 3,500 before present [B.P.] and 1,500 B.P.), a Chinese shrimp village (1870 to 1912-1915), the Winehaven winery (1907 to 1919), a quarry (sometime between 1924 and 1939), the NFD (operated by the U.S. Navy [Navy] from the early 1940s until its closure in 1995), and the Point Molate Beach Park that has been operated by the City since its reopening in 2013. For a discussion of

archaeological resources, historical uses, and the designation of buildings as historic resources, please refer to **Section 4.4**.

Vestiges of early land uses consist primarily of archaeological remains associated with Native American occupation and the Chinese shrimp village, in addition to landform alterations at Point Molate from quarry activities. A significant number of buildings and structures remain from the operation of Winehaven and the NFD. The City now owns the Project Site and onsite facilities entirely. The City uses approximately 18 acres of the southwest portion of the Project Site as a park (the Point Molate Beach Park). The park includes a paved parking area, picnic tables, portable toilets, and shoreline access. Public use of the park is allowed from sunrise to sunset. The facilities associated with Winehaven and the NFD are discussed below.

Winehaven-Era Facilities

Prior to its closure in 1919 during the Prohibition era, Winehaven was the largest winery in California. The operation included two large wine cellars, a bottling facility, warehouse, rail lines, wharf, hotel, school, post office, steam generation plant, firehouse, and 29 residences. Winehaven was placed on the NRHP in 1978. The Navy took over in 1941 and established the Richmond Naval Fuel Depot, reusing many of the Winehaven buildings for housing, warehousing, offices, storage, maintenance structures, and a fire station as shown in **Figure 3-3**. Winehaven-associated buildings within the Historic District planning area include the following.

- Building No. 1, a wine cellar, is the largest and most distinctive building on the Project Site. It is architecturally dramatic with round corner turrets and crenellated parapets, evoking a Teutonic castle. The Navy used Building No. 1 as a warehouse.
- Building No. 6, a wine cellar, is the second largest building on the Project Site and is located south of Building No. 1. The Navy used Building No. 6 for administrative offices and a warehouse.
- Building No. 10, a loading dock and warehouse, is immediately east of Building No. 1.
- Building No. 13, a power house, on the east side of Stenmark Drive, is located east of Building No. 10.
- Building No. 17, a warehouse, is located east of the Building No. 13.
- Building No. 60, the Winemaster's House, is located on the hill above Building No. 1. It later served as a residence for the NFD commander.
- Twenty-eight cottages were constructed for winery employees on the hill above Building No. 1 and Stenmark Drive. The Navy subsequently reused the cottages for military housing.
- The Internal Railway System is a series of railroad tracks laid on either side of Building Nos. 1, 6, and 10 to transport supplies into Winehaven and finished wine to a pier for shipment.

Section 4.4, Cultural Resources and Tribal Cultural Resources, contains additional information on the facilities listed above.

Navy Facilities

In addition to utilizing the existing Winehaven buildings, the Navy constructed extensive facilities for the storage and distribution of fuel and oil. The Navy converted approximately 90 acres of the Project Site for the following uses.

- 43 underground storage tanks
- 32 aboveground storage tanks (AST)
- 24 miles of fuel and oil pipelines
- Access roads
- Fuel and oil pump houses
- Maintenance/storage buildings
- A pier located in the west central portion of the Project Site. The T-shaped pier extends approximately 1,450 feet from the shoreline into the Bay and was constructed of concrete and timber piles. It was used to pump fuel to vessels docked at the pier and supports pipelines and a transfer operation facility.
- A laydown area known as Drum Lot No. 2, which has a paved area in the southern portion of the Project Site that was used for staging and temporary storage

Section 4.7, Hazards, Hazardous Materials, and Wildfire contains additional information on the facilities listed above.

Current Licenses

The City is currently licensing portions of the Project Site to San Francisco State University and Nematode. San Francisco State University has an annually renewed license in place to study eelgrass. As the eelgrass study relates to sub-tidal habitat and propagating shoreline eelgrass, the licensee may remain. Nematode has a significant number of partners that occupy space, and this provides the City with a significant amount of funds that contribute towards the General Fund Maintenance Costs. Nematode and partners occupy mostly the Building No. 1 (Winehaven wine cellar/Navy warehouse) and Building No. 123 Area. The Nematode license could be cancelled at any given time. A Notice to Vacate would be provided, which would give the licensee 90 days to vacate.

4.9.3.2 Surrounding Land Uses

The Project Site is located on the west side of the San Pablo Peninsula within the northwest portion of the City (see **Figures 3-1** and **3-2**). The San Pablo Peninsula is currently isolated from the residential and commercial areas of the City by topography, roadways, and industrial land uses. The Peninsula is separated from North Richmond by the San Pablo Bay and the San Pablo Canal, from Point Richmond by Interstate 580 (I-580); and from the remainder of the City by the Richmond Parkway. Connectivity between the San Pablo Peninsula and the remainder of the City is further limited due to the extensive industrial development of the Chevron®-Richmond Refinery, which lies between the peninsula and the City and between the San Pablo Bay and Point Richmond. South of the Project Site is the California Department of Transportation maintenance facility and storage yard, which abuts the I-580 toll plaza for the Richmond-San Rafael Bridge. Other uses in the area include Port of Richmond Terminal No. 4, the Point San Pablo Yacht Harbor, and residential uses at Point Richmond. These surrounding land uses are described in detail below.

Chevron®

Chevron® owns the majority of the land in the vicinity of the Project Site. Chevron® property borders the Project Site on three sides and occupies approximately 2,900 acres. The main refinery is located

approximately 1 mile southeast of the Project Site. The refinery produces gasoline, jet fuel, diesel, lubricant oil, wax, and other chemical products from crude oil brought in from foreign and domestic sources. Facilities include the main refinery area, pipelines, and numerous storage tanks, which stretch from the refinery across the hills of the San Pablo Peninsula to within approximately 300 feet of the Project Site. The property owned by Chevron® is also used for a variety of other industrial purposes.

Section 4.7 contains information concerning potential impacts of the Project on Chevron® operations east of the Project Site. To the south is a small aggregate quarry owned by Chevron® and operated by Dutra Materials, and several large ASTs are located east of Stenmark Drive. To the north of the Project Site is the Chevron® employee rod and gun club, which features a pistol range, marina, and other recreational facilities.

In July of 2014, Chevron® was granted approval to begin the Chevron Refinery Modernization Project which included a replacement hydrogen plant, new sulfur removal equipment improvements, infrastructure improvements, equipment to reduce air emissions, design features to minimize environmental impacts, safety programs, and physical modifications including the replacement of 17 piping circuits in the Crude Unit (City of Richmond, 2019b). The new safety program is more stringent than the current regulations and includes updates to piping circuits to prevent corrosion, as well as significant additional regulatory oversight with independent safety inspectors who will report annually to the community (Chevron, 2019).

Port of Richmond Terminal No. 4

Currently owned and managed by the City, Port of Richmond Terminal No. 4 is located at the tip of the San Pablo Peninsula. It consists of approximately 37 acres of cargo terminal that includes a 12,000-square foot warehouse. Terminal No. 4 has the potential to handle bulk liquids, dry bulk materials, metals, vehicles, and break-bulk cargoes; however, its use as a cargo terminal is currently pending (City of Richmond, 2019b).

Point San Pablo Yacht Harbor

The Point San Pablo Yacht Harbor is located approximately 1 mile north of the Project Site and is privately owned. Land use at the Yacht Harbor consists of berths and a small restaurant (Point San Pablo Yacht Harbor, 2019). The harbor is used by fishing boats and houseboats along with a few sport and sailboats.

Point Richmond

Point Richmond is a small residential neighborhood in the City located approximately one and a half miles southeast of the Project Site on the south side of I-580. Located on a rolling hillside facing the Bay, Point Richmond is listed on the NRHP and is notable for its architecture. Some of the homes at the top of the hillside have views of the Chevron®-Richmond Refinery and I-580.

Potrero Ridge

Potrero Ridge forms a spine along the axis of the San Pablo Peninsula from a 494-foot peak located just southeast of the Project Site along the eastern border to a 328-foot peak north of the Project Site. From

the southern peak, a ridge extends southwest near the Chevron® quarry and ASTs. These ridges separate the Project Site from development to the east, including the Chevron®-Richmond Refinery and the City, and therefore isolate the Project Site from industrial activities to the east.

4.9.4 2011 FEIR ANALYSIS

This section provides a summary of the impacts to land use and planning conditions analyzed for the Casino Project of the 2011 FEIR, followed by a description of any changes since the 2011 FEIR that relate to land use and planning.

4.9.4.1 2011 FEIR Summary of Impacts

Impacts

The 2011 FEIR determined that the proposed Casino Project development would have conflicted with two General Plan land use policies related to affordable housing and existing land use and zoning designations for the Project Site, but it would have been consistent with applicable Bay Plan policies. For the identified conflicts, mitigation measures were identified to incorporate affordable housing into the project. The 2011 FEIR found that the proposed update to the General Plan, which included changing the land use designations on the Project Site, would resolve the potential land use conflict. With mitigation and the proposed General Plan Update, the 2011 FEIR found the potential impacts to be less than significant.

The 2011 FEIR determined that the proximity of the Project Site to the Chevron®-Richmond Refinery and General Chemical facilities presented a potential for incompatible land uses. However, due to safety precautions incorporated into the Chevron® Refinery, the potential incompatibility was found to be less than significant. In addition, the 2011 FEIR proposed a mitigation measure of installing warning sirens on the Project Site to further reduce the potential for impacts.

There were no established communities on or near the Project Site, and no known habitat conservation plans or natural community conservation plans were applicable to the Project Site; therefore, the 2011 FEIR determined there would be no impact to existing communities and habitat conservation plans or natural community plans.

Cumulative Impacts

The 2011 FEIR determined that the Casino Project would not disrupt neighboring land uses, prohibit access to the shoreline, or otherwise conflict with neighboring land uses. The 2011 FEIR further found that, because the Casino Project considered in the 2011 FEIR would be consistent with one of the land use options under consideration at that time for the General Plan Update, the Casino Project had been considered by the City in its General Plan update process and therefore there would not be cumulatively considerable adverse impacts to land use planning.

4.9.4.2 Changes Since the 2011 FEIR

The City Council approved the General Plan update in 2012. The General Plan Update included the Project Site within the San Pablo Peninsula Change Area and designated specific land use designations on the Project Site, as shown on **Figure 3-4** and specifically described in **Section 4.9.2.3**. The land use designations are Business/Light Industrial, OS, PR, Hillside Residential, and Medium-Density Residential.

The CEQA Guidelines have been updated and the analysis below addresses the updated Guidelines. Specifically, rather than address consistency with an applicable habitat conservation plan or natural community conservation plan in the Land Use section, the Guidelines recommend that this analysis be included in the Biological Resources section of an Environmental Impact Report (EIR). In addition, the CEQA Guidelines have clarified that the land use plan consistency analysis should focus on plans and policies within those plans adopted to mitigate or avoid an environmental effect.

4.9.5 IMPACTS

4.9.5.1 Thresholds of Significance

Criteria for determining the significance of impacts to visual resources have been developed based on Appendix G of the CEQA Guidelines and relevant agency thresholds. Impacts associated with land use, planning, and recreation would be considered significant if the Modified Project would:

- physically divide an established community; or
- cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

4.9.5.2 Method of Analysis

This section evaluates the general consistency of the proposed Modified Project with applicable land use plans, policies, and regulations. Section 15358(b) of the CEQA Guidelines states that effects “analyzed under CEQA must be related to physical change.” Additionally, Section 15125(d) of the CEQA Guidelines states that the EIR should discuss any inconsistencies between a project and applicable general and regional plans. The environmental analysis under CEQA focuses on consistency with plans that may be amended by the project, if approved.

Information provided in this section is derived from a number of sources including the Reuse Plan (Appendix D of the 2011 FEIR), General Plan, and the 2011 FEIR. This analysis focuses on the manner in which development could alter the Project Site under baseline conditions, which are defined for the purposes of the analysis in this section as physical conditions on or around the publication of the NOP in July 2019.

4.9.5.3 Effects Found Not to be Significant Without Further Analysis

Review and comparison of the existing setting conditions and the Modified Project characteristics with the significance criteria clearly show that no impacts would be associated with the following criteria for the reasons stated below for each.

The Modified Project would not physically divide an established community.

All of the buildings and residences located onsite are vacant and the Modified Project Site is surrounded by industrial uses, water, and undeveloped land. There are no communities on the Modified Project Site or in the vicinity of the Modified Project Site. The Modified Project does not propose to construct any new roadways or aboveground infrastructure through existing communities. The Modified Project would widen Stenmark Drive, but the widening would not occur within an established community and accordingly, would not divide an established community. Therefore, the Modified Project would not physically divide an established community and no impact would occur.

4.9.5.4 Project-Level Impacts

IMPACT 4.9.1	CAUSE A SIGNIFICANT ENVIRONMENTAL IMPACT DUE TO A CONFLICT WITH ANY LAND USE PLAN, POLICY, OR REGULATION ADOPTED FOR THE PURPOSE OF AVOIDING OR MITIGATING AN ENVIRONMENTAL EFFECT
Significance Before Mitigation	Less Than Significant
Mitigation Measures	None Required
Significance After Mitigation	Not Applicable
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

4.9.5.4.1 State Lands Commission

The SLC jurisdiction on the Project Site is limited to tide or submerged lands. The existing pier would be retrofitted and reconfigured for passenger use and a water transit terminal, and would not increase the square footage of water area covered by the pier or require reinstallation and replacement of pilings. Thus, the Modified Project is not expected to result in any development of tide or submerged lands and therefore the Modified Project is not anticipated to require a lease or approvals from the SLC.

San Francisco Bay Conservation and Development Commission Bay Plan

The portions of the Modified Project that would be developed outside of the jurisdiction of the CZMA as carried out by the BCDC would be mixed use and residential buildings. The portion of the Modified Project outside of the BCDC's jurisdiction would contain uses that would not be consistent with the following Recreation Policies: No. 4-a, No. 4-b, and No 4-c. However, the BCDC does not have jurisdiction over this portion of the Modified Project and the portion would not inhibit uses or Bay Plan policies within the areas of BCDC jurisdiction.

The components of the Modified Project that would be developed within the jurisdiction of the CZMA as carried out by the BCDC would be the shoreline park and recreational amenities. In addition, the Modified Project would construct a portion of the Bay Trail Extension project. As presented and discussed in **Appendix O**, the Modified Project would be consistent with applicable policies from the Bay Plan within the areas of BCDC jurisdiction. The Modified Project would be consistent with the Recreation Policy 4-a

due to the public access waterfront park that would include areas that allow for walking; bicycling; environmental, historical, and cultural education and interpretation; viewpoints; and beach access.

East Bay Regional Park District Master Plan 2013

The EBRPD Master Plan includes the Bay Trail going along the Point Molate shoreline within the Project Site. The Modified Project would implement a portion of the Bay Trail Extension project, which follows the EBRPD desired Bay Trail Plan.

City of Richmond General Plan Land Use and Zoning Designations

As discussed in the Project Description (**Section 3.0**), the Modified Project includes a General Plan Amendment and rezoning to change the Project Site General Plan land use designations and zoning designations to allow for the proposed development as presented in **Figure 3-12** and **Table 3-1** in **Section 3.4.1**.

The proposed on-site Planning Areas (shown on **Figure 3-10**) would be rezoned as PA with a Planned Area Plan and other required plans depicting proposed development. The PA zoning designation allows larger sites to be developed in a coherent manner when a mix of uses or a character is desired, as is proposed as a part of the Modified Project.

According to the City Zoning Ordinance, for a site to be zoned PA, the site must meet the minimum lot size requirement of 2 acres to allow for a mix of residential and non-residential uses. The Project Site is approximately 276 acres of land above water and would be consistent with the minimum lot size requirements. Furthermore, due to the unique mix of uses and reuse of historical buildings, the Modified Project would meet the other required findings per the City Zoning Ordinance (presented in detail in **Section 4.9.2.3**) for zoning to a PA – that the Modified Project would be suitable for the Project Site, would be consistent with the General Plan, would not have a substantial adverse effect on surrounding land, would comply with design guidelines, and would be demonstratively superior as a PA.

City of Richmond General Plan Policies

A conflict between the Modified Project and the City's General Plan policy does not, in and of itself, constitute a significant environmental impact. A conflict is considered to be a significant environmental impact only when it is related to a policy adopted for the purpose of avoiding or mitigating an environmental effect and it is anticipated that the conflict would result in a significant adverse physical impact. Any such associated physical impacts are discussed in this Draft Supplemental EIR (SEIR) under specific topical sections, such as noise, air quality, and transportation and circulation, as appropriate. Furthermore, as presented and discussed in **Appendix L**, discussing the Modified Project's Consistency with the City's General Plan, the Modified Project would require mitigation, as identified in this SEIR and summarized below in **Table 4.9-2**, to be consistent with the applicable policies from the General Plan.

TABLE 4.9-2
MITIGATION REQUIRED FOR GENERAL PLAN CONSISTENCY

General Plan Policy	Mitigation Required for Consistency
LU5.3 Land Use Compatibility	With Mitigation Measure 4.10-1 , noise from construction and operation of the Modified Project would not significantly impact existing off-site sensitive receptors and proposed on-site sensitive receptors. With Mitigation Measure 4.10-1 , the future noise levels onsite at project sensitive receptors would not exceed the City noise level limits (Appendix T).
HW3.3 Emergency and Disaster Preparedness	Mitigation Measure 4.7-1 would require the Modified Project to prepare an emergency response plan that includes “shelter-in-place” areas for the Project Site in the event of a natural disaster.
HW9.1 Air Quality	Mitigation Measure 4.2-2 would reduce air quality impacts through the use of energy efficient lighting and appliances, installation of an electric car port, use of properly maintained diesel vehicles and equipment, preferential parking for carpools and vanpools, and the planting of trees.
ED8.4 Public Access to the Shoreline	As discussed in Appendix L , the Modified Project improves public access to the Shoreline by implementing the portion of the Bay Trail Extension project that runs through the Project Site, adding paths to the bay, improving and expanding the beachfront park, and making improvements to allow more people to visit the site, including remediating the site, widening Stenmark Drive, and improving transit access. However, the Modified Project could impact certain wetlands on the site. The impacted wetlands mainly consist of man-made and channelized drainages. Mitigation Measures 4.3-16 and 4.3-19 are included in this SEIR to ensure impacts would be less than significant.
CN1.1 Habitat and Biological Resources Protection and Restoration	Mitigation Measures 4.3-1 through 4.3-20 have been identified to minimize and/or lessen unavoidable impacts related to biological resources and sensitive habitats.
CN1.2 Local Native Plant Species	Mitigation Measures 4.3-10 and 4.13-3 to manage and control the spread of invasive species that are considered a risk to native plant. Mitigation Measures 4.3-12 and 4.3-13 would include a Vegetation Management Plan and Open Space Plan that would address the importance of preserving native vegetation. Mitigation Measure 4.3-20 requires the use of native tree species and planting specifications included within the Urban Greening Master Plan.
CN6.2 Protection and Expansion of Tree Resources	Mitigation Measure 4.3-20 requires the use of native tree species and planting specifications included within the Urban Greening Master Plan. In accordance with the Urban Greening Master Plan, use of trees along streetscapes will be maximized. The mitigation measure also includes recommendations on tree species removal and replacement.
SN4.1 Noise Levels	With Mitigation Measure 4.10-1 , the future noise levels onsite at project sensitive receptors would not exceed applicable noise standards. Mitigation Measure 4.10-1 includes regulating noise-creating equipment, locating staging areas as far as practicable from noise sensitive receptors, posting work area speed limits, notifying nearby sensitive receptors of construction schedules, and temporarily

	shielding with a noise barrier any engine-powered construction equipment that would be used for more than 5 days.
SN4.3 Transportation-Related Noise	With Mitigation Measure 4.10-1 , the future transportation-related noise levels onsite at project sensitive receptors would not exceed City noise level limits.
CR1.10 Vehicular Level of Service Standards for West County Routes of Regional Significance	Mitigation Measure 4.13-2 would help lessen the impact of the unacceptable level of service at an intersection at a Contra Costa Transportation Authority Route of Regional Significance.

Point Molate Reuse Plan

The Modified Project would be generally consistent with the Reuse Plan and would generally adhere to the basis of several proposed development area ideas. The purpose of the Reuse Plan was to serve as a guide for the coherent reuse, preservation, and development of the Modified Project Site and to provide development options. The Reuse Plan proposes the preservation of the Historic District and retention of 70 percent of the Project Site's open space. The Modified Project would preserve the on-site historical buildings, retain approximately 193.1 acres or 70 percent of the Modified Project Site, as open space, and would incorporate ideas from the proposed reuse potential described in the Reuse Plan in the development areas as described in **Table 4.9-1**. Therefore, the Modified Project would not conflict with the Reuse Plan.

Construction of the Bay Trail

Impacts as a result of the construction and implementation of the Bay Trail are analyzed in the San Francisco Bay Trail at Point Molate Initial Study/Mitigated Negative Declaration (IS/MND), which is incorporated by reference, as described in **Section 1.4.4**. The Bay Trail IS/MND determined that impacts from the construction of the Bay Trail in regards to causing a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect, were less than significant because it follows the City General Plan Parks and Recreation Element goals and policies by connecting Bay Area parks and recreation areas via bike and pedestrian paths. As a result, construction of the Bay Trail as a component of the Modified Project would not result in a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect and the impact would be less than significant.

Off-Site Improvements

The off-site improvements, as shown in **Figure 4.0-1**, would require a right-of-way easement for construction and operation. The right-of-way easement would not conflict with any applicable land use policies or plans and would adhere to all City ordinances pertaining to easements.

Conclusion

Based on the analysis above, as well as the assessment presented in **Appendix L** regarding consistency with applicable General Plan policies and actions, and **Appendix O** regarding consistency with applicable

Bay Plan policies, impacts related to development under the Modified Project would be less than significant.

4.9.5.5 Cumulative Impacts

IMPACT 4.9.2	CUMULATIVE LAND USE IMPACTS
Significance Before Mitigation	Less Than Significant
Mitigation Measures	None Required
Significance After Mitigation	Not Applicable
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

The Modified Project, in combination with other regional growth, would increase the amount of residential areas. The Modified Project would require a General Plan amendment and would require rezoning for the project to be consistent with the General Plan and zoning regulations. As identified under **Impact 4.9.1**, the Modified Project, with mitigation as identified in this SEIR and summarized in **Table 4.9-2**, would be consistent with the relevant policies of the General Plan. Future development in the City and County would be guided by the City and County General Plan, applicable Specific Plans, and Zoning Ordinance. Similarly, it is assumed that planned development projects within the City and County would be consistent with these policies and regulations, which prevent disorderly growth or incompatible land uses. The Modified Project would not physically divide an established community, disrupt neighboring land uses, prohibit access to the shoreline, or otherwise conflict with neighboring land uses. There are no specific projects identified that, when combined with the effects of the Modified Project, would result in significant cumulative effects on land use and planning. Further, all future development in the City would also be reviewed for consistency with the General Plan designations and policies by the City, in accordance with the requirements of CEQA and the State zoning and planning laws, all of which require findings of plan and policy consistency prior to approval of entitlements for development. Therefore, the Modified Project and future development would not result in a significant cumulative impact on land use and planning.

4.9.6 MITIGATION MEASURES

Review of the mitigation measures identified in the 2011 FEIR determined that some measures required revisions or were not applicable to the Modified Project. It was determined that several of the mitigation measures that were identified in the 2011 FEIR are no longer applicable in regard to land use and planning for the Modified Project. **Appendix K** provides a summary of why each mitigation measure from the 2011 FEIR was deleted and the reasoning for that determination.

4.10 NOISE

4.10.1 INTRODUCTION

This section provides a description of noise conditions in the vicinity of the Project Site and describes the changes to those conditions that would result from implementation of the Point Molate Mixed-Used Development Project (Modified Project). Following an overview of the relevant regulatory setting in **Section 4.10.2** and the environmental setting in **Section 4.10.3**, project-related impacts and mitigation measures are presented in **Section 4.10.5** and **Section 4.10.6**, respectively. The noise impacts associated with the Casino Project and analyzed as Alternative A in the *Final Environmental Impact Report for the Point Molate Mixed-Use Tribal Destination Resort and Casino Project* (2011 FEIR) are also summarized in **Section 4.10.4** and compared to the impacts of the Modified Project.

4.10.2 REGULATORY SETTING

4.10.2.1 Federal

Noise criteria used to analyze the potential for noise impacts include the Federal Interagency Committee on Noise (FICON), which assessed the annoyance effects of changes in ambient noise levels resulting from aircraft operations, and the Federal Highway Administration (FHWA) Noise Abatement Criteria (NAC) for the assessment of noise consequences related to surface traffic. The FHWA establishes NAC for various land uses, which have been categorized by activity. Land uses are categorized on the basis of their sensitivity to noise. These noise criteria are described in more detail in **Section 4.10.5.1**.

4.10.2.2 State

The California Building Code (Part 2, Title 24, California Code of Regulations) provides that, consistent with local land use standards, residential structures located in noise critical areas, such as proximity to highways, county roads, city streets, railroads, rapid transit lines, airports, or industrial areas shall be designed to prevent the intrusion of exterior noises into the interior beyond 45 decibel (dB) measured as Community Noise Exposure Level (CNEL) or day-night average levels (L_{dn}).

Residential structures to be located where the annual L_{dn} or CNEL exceeds 60 dB shall require an acoustical analysis showing that the proposed design will achieve the prescribed allowable interior noise level.

4.10.2.3 Local

City of Richmond General Plan

Noise Element

The Public Safety and Noise Element of the City of Richmond (City) General Plan 2030 (General Plan) contains goals, policies, and actions to ensure that City residents are not subjected to noise beyond acceptable levels. The City has adopted the land use compatibility matrix presented in the State of California General Plan Guidelines, as shown in **Table 4.10-1**.

TABLE 4.10-1
COMMUNITY NOISE EXPOSURE (L_{dn} OR CNEL, dB)

Land Use Category	Community Noise Exposure (L _{dn} or CNEL, dB)						Interpretation:
	55	60	65	70	75	80	
Residential: Low density single family, duplex, mobile homes							Normally Acceptable Specified land use is satisfactory based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
Residential: Multiple family							
Transient lodging, motels, hotels							
Schools, libraries, churches, hospitals, nursing homes							Conditionally Acceptable New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction but with closed windows and fresh air supply systems or air conditioning will normally suffice.
Auditoriums, concert halls, amphitheaters							
Sports arenas, outdoor spectator sports							
Playgrounds, neighborhood parks							Normally Unacceptable New construction or development should generally be discouraged if new construction or development does precede a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
Golf courses, riding stables, water recreation, cemeteries							
Office buildings, business, commercial, and professional							
Industrial, manufacturing, utilities, agriculture							Clearly Unacceptable New construction or development should generally not be undertaken.

Source: Governor's Office of Planning and Research, State of California General Plan Guidelines, 2003.

The most relevant General Plan goals, policies, and actions are listed below.

GOAL SN4 Acceptable Noise Levels. Achieve noise levels consistent with acceptable standards and reduce or eliminate objectionable noise sources. Prevent where possible, or mitigate

noise impacts from industries, roadways, railroads, and businesses in residential areas and sensitive uses in the community. In addition, apply new technology, buffers, and other solutions to reduce excessive noise.

Policy SN4.1 Noise Levels. Work with regulatory agencies to monitor and enforce noise standards in the community.

Reduce or mitigate objectionable noise sources and require new noise sources to comply with noise standards. Regulate both indoor and outdoor noise levels to protect health and safety. Use a combination of noise standards and existing noise levels to determine impacts and mitigation measures.

Policy SN4.2 Land Use Compatibility. Minimize conflicts between land uses to protect wetlands, marshlands, and creeks; protect human and environmental health and safety; preserve community character; and retain job generating activities that have long-term viability.

Types, intensities, and ranges of use and development should be compatible with existing uses and should minimize or eliminate conflicts that adversely impact wetlands, marshlands, creeks, mudflats, public safety, human or environmental health or generate nuisances. All new development must avoid or mitigate to the greatest extent feasible potential negative impacts such as noise, odors, and pollution.

Consistent with the City's Industrial Buffer Zone Ordinance, prohibit the location of residential uses in the area between Harbour Way South and Marina Way South, and between [Interstate 580] I-580 and Hall Avenue.

Encourage existing larger industries that have surplus land to develop modern industrial parks that could attract new and existing industries and facilitate a reduction of existing and future land use conflicts.

New development should complement the character and scale of existing neighborhoods, cultural resources, historic structures, and landscapes. In particular, existing industrial and residential uses can successfully coexist through well-conceived circulation and urban design strategies including buffers (which may be in the form of sound walls and/or enclosed buildings and appropriate transitional habitat zones between wetlands, marshlands, creeks, and mudflats) and transitional uses, rerouting of truck traffic, and design components that mark transitions in land use. Similar to other cities that host mixed uses, consider requiring land use covenants for new development in areas where new uses may generate a perception of conflict with existing uses. Require sufficient visual open space and/or landscaped screening between industrial operations and adjacent residential or recreational activities in order to create adequate buffers.

Policy SN4.3 Transportation-Related Noise. Monitor changes in technology that will prevent and mitigate transportation-related noise impacts on residential and sensitive uses in the community.

Support traffic and freeway improvements that will reduce noise impacts of vehicles.
Alternatives to sound walls should be considered where possible.

City of Richmond Municipal Code

Chapter 9.52 of the Richmond Municipal Code (RMC) restricts noise from construction activities “where technically and economically feasible” to separate mobile and stationary source noise standards established in the ordinance. Specifically, for single-family and multi-family residential land uses, the ordinance cites weekday (7:00 a.m. to 7:00 p.m.) noise standards for mobile construction equipment of 75 A-weighted decibels (dbA) and 80 dBA, respectively. The weekend and holiday (9:00 a.m. to 8:00 p.m.) standards are 60 dBA and 65 dBA, respectively. For stationary source construction noise, the ordinance cites weekday (7:00 a.m. to 7:00 p.m.) noise standards of 60 dbA and 65 dBA for single-family and multi-family residential land uses, respectively. The weekend and holiday (9:00 a.m. to 8:00 p.m.) standards are 55 dBA and 60 dBA, respectively.

In addition, RMC § 9.52.100 establishes maximum noise levels that should not be exceeded by more than 30 minutes in any hour as measured at a property line or zoning district boundary. These standards are presented in **Table 4.10-2**. The noise standards in the table are to be modified as follows to account for the effects of time and duration on noise levels.

- In residential zones, the noise standard shall be 10 dBA lower between 10:00 p.m. and 7 a.m.
- Noise that is produced for no more than a cumulative period of 5 minutes in any hour may exceed the standards above by 5 dBA.
- Noise that is produced for no more than a cumulative period of 1 minute in any hour may exceed the standard above by 10 dBA.

The noise level performance standards of the RMC (Chapter 9) are described below.

Chapter 9.52 Community Noise Ordinance

9.52.060 Persistent noises.

Failure to comply with the following provisions shall constitute a nuisance and violation of this chapter.

- (a) All construction equipment powered by internal combustion engines shall be properly muffled and maintained.
- (b) Unnecessary idling of internal combustion engines is prohibited.
- (c) All stationary noise-generating construction equipment such as tree grinders and air compressors are to be located as far as is practical from existing residences.
- (d) Quiet construction equipment, particularly air compressors, are to be selected whenever possible.
- (e) Use of pile drivers, sources of impulsive sound, and jack hammers shall be prohibited on Sundays and holidays, except for emergencies or as approved in advance by the Building Official.

9.52.100 Exterior noise limits.

- (a) No uses or activities shall create levels that exceed the standards in **Table 4.10-2**.
- (b) In determining whether any noise exceeds the maximum exterior noise limits set forth in this section, measurements shall be taken at the property line of the property from which the noise emanates, except that for noise emanating from property in an M-3 or M-4 zoning districts, measurement shall be taken at boundary of the zoning district in which the property is located.
- (c) No person shall operate or cause to be operated within a dwelling unit, any source of sound that causes the sound level when measured inside a neighboring receiving dwelling unit to exceed the allowable noise level, for any period of time.
- (d) In the event the noise, as judged by the enforcing authority, contains a steady, pure tone such as a whine, screech, or hum, or is an impulsive sound such as hammering or riveting, or contains music or speech, the standard limits set forth above shall be reduced by 5 dB.
- (e) The exterior noise limits for any source of noise within any residential zone shall be reduced by 10 dB between 10:00 p.m. and 7:00 a.m. The exterior noise limits for any source of noise in any zone other than a residential zone shall be reduced between 10:00 p.m. and 7:00 a.m. so that when measured at the property line of a "noise-sensitive use" the noise does not exceed 50 dB.

TABLE 4.10-2
CITY OF RICHMOND COMMUNITY NOISE ORDINANCE EXTERIOR NOISE LIMITS

Zoning District	Maximum Noise Level in dBA (levels not to be exceeded more than 30 minutes in any hour)		Maximum Noise Level in dBA (level not to be exceeded more than 5 minutes in any hour)
	Measured at Property Line or District Boundary	Measured at Any Boundary of a Residential Zone	Between 10 p.m. and 7 a.m.**; Measured at Any Boundary of a Residential Zone
Single-Family Residential	55	-	-
Multi-Family Residential	55	-	-
Commercial	70	60	50 or ambient noise level
Light Industrial and Office Flex*	70	60	50 or ambient noise level
Heavy and Marine Industrial	75	65	50 or ambient noise level
Public Facilities and Community Use	65	60	50 or ambient noise level
Open Space and Recreational Districts	65	60	50 or ambient noise level

Notes: *For M-1 and M-2, the measurement will be at property lines.

** Restricted hours may be modified through condition of an approved conditional use permit.

Source: RMC § 9.52.100

Article 15.04.605 Noise

The City of Richmond Zoning Ordinance Article 15.04.605 establishes additional standards for maximum noise limits and procedures for enforcing them to ensure that the General Plan limits on noise exposure

and land use compatibility policies are achieved and maintained. The purpose of this article is to establish the principles and context for the application of noise limits, standards for noise exposure and land use compatibility, and requirements for reasonable noise attenuation measures, all which are intended to protect noise sensitive uses from excessive noise exposure from other uses.

The land uses listed below are assigned to the following Designated Noise Zones.

- **Noise Zone 1:** All hospitals, libraries, churches, and low-density and medium-density residential uses.
- **Noise Zone 2:** Outdoor sports and recreation uses, parks, and playgrounds, including such sport, recreation, park, and playground areas at schools.
- **Noise Zone 3:** All high-density multi-family residential, mixed-use, professional office, schools, and public institutional properties.
- **Noise Zone 4:** All commercial uses, excluding professional office and mixed-use development.
- **Noise Zone 5:** All industrial uses.

The noise standards established in **Table 4.10-3** apply to all land within a designated noise zone. The limits are intended to express limits on regularly occurring noise for the specified time periods, average over an hour, and do not apply to incidental, infrequent, or unexpected noise, which are subject to Chapter 9.52. The general prohibitions and specific prohibitions contained in Chapter 9.52 apply to all land uses and activities in the City, and, in the case of a conflict, the more restrictive provisions apply.

TABLE 4.10-3
NOISE STANDARDS, DBA – NOISE LEVELS FOR A TIME PERIOD NOT EXCEEDING

Noise Zone	Location	Time Period	Minutes/Hour				
			15	10	5	1	0
1	Exterior	7 a.m. – 10 p.m.	60	65	70	75	75
		10 p.m. – 7 a.m.	50	55	60	65 ¹	70
	Interior	7 a.m. – 10 p.m.	--	--	55	60	65
		10 p.m. – 7 a.m.	--	--	45	50	55
2	Exterior	7 a.m. – 10 p.m.	65	70	75	80	80
		10 p.m. – 7 a.m.	50	55	60	65	70
3	Exterior	Any time	65	70	75	75	75
	Interior	Any time	--	--	55	60	65
4	Exterior	Any time	60	65	70	75	80
	Interior	Any time	--	--	55	60	65
5	Exterior	Any time	70	75	80	85	90
	Interior	Any time	Occupational Safety and Health Administration Standards Apply				65

¹ This standard does not apply to private balconies of multi-family residences. Multi-family developments with balconies that do not meet the 65 CNEL are required to provide occupancy disclosure notices to all future tenants regarding potential noise impacts.

Table 4.10-4 describes the noise exposure requirements and limitations of various land uses within the listed L_{dn} ranges.

TABLE 4.10-4
NOISE EXPOSURE – LAND USE REQUIREMENTS AND LIMITATIONS

Land Use	Day/Night Average Sound Level, L_{dn}	Requirements and Limitations
Residential ¹ : Low-Density Single-Family, Duplexes and Manufactured Housing	Less than 65	Normally acceptable
	65 to 75	Conditionally acceptable, acoustic study and noise attenuation measures required
	Over 75	Unacceptable, acoustic study and noise attenuation measures required
Residential Multi-Family and Transient Lodging	Less than 70	Normally acceptable
	Over 70	Conditionally acceptable, acoustic study and noise attenuation measures required
Schools, Libraries, Churches, Hospitals, Residential Facility, Playgrounds, Neighborhood Parks, Commercial and Office	Less than 70	Normally acceptable
	70 and Over	Conditionally acceptable, acoustic study and noise attenuation measures required
Industrial, Manufacturing and Utilities, Golf Courses, Riding Stables, Water Sports, and Cemeteries	Less than 75	Normally acceptable
	75 and Over	Conditionally acceptable, acoustic study and noise attenuation measures required; avoid uses involving concentrations of people
Notes: ¹ New residential development in noise-impacted areas are subject to the following noise levels. <ol style="list-style-type: none"> For new single-unit residential development, maintain a standard of 60 L_{dn} for exterior noise in private use areas. For new multi-unit residential development, maintain a standard of 65 L_{dn} in community outdoor recreation areas. Noise standards are not applied to private decks and balconies and shall be considered on a case-by-case basis in the Mixed-Use Districts. Where new residential units (single and multi-family) would be exposed to intermittent noise levels generated during train operations, maximum railroad noise levels inside homes shall not exceed 45 dBA in bedrooms or 55 dBA in other occupied spaces. These single event limits are only applicable where there are normally four or more train operations per day. 		

Article 15.04.605.060 establishes additional regulations for specific activities. General construction noise shall be limited to weekdays from 7:00 a.m. to 6:00 p.m. Pile driving and similar loud activities shall be limited to weekdays from 8:00 a.m. to 5:00 p.m. General construction noise on projects repairing, renovating, or adding to residential structures with one to five dwelling units shall be limited to the hours of 7:00 a.m. to 8:00 p.m. Monday through Friday and 9:00 a.m. to 6:00 p.m. on Saturdays, Sundays, and federal holidays. Pre-construction activities, including loading and unloading, cleaning of mechanical toilets, deliveries, truck idling, backup beeps, yelling, and radios also are limited to these construction noise hours.

4.10.3 ENVIRONMENTAL SETTING

Information provided in this section is derived from a number of sources including the Environmental Noise & Vibration Assessment (**Appendix T**) and the Transportation Impact Analysis (TIA) presented in **Appendix D**. This analysis focuses on the manner in which development could alter the Project Site under future baseline 2021 conditions, as well as future conditions defined in **Section 4.10.5**.

4.10.3.1 Acoustical Background and Terminology

Noise is often defined as unwanted sound. Frequently occurring pressure variations (at least 20 times per second) detected by human ear is identified as sound. The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable. Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale uses the hearing threshold (20 micropascals of pressure) as a point of reference, defined as 0 dB. Other sound pressures are then compared to the reference pressure, and the logarithm is taken to keep the numbers in a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB. Another useful aspect of the decibel scale is that changes in levels (dB) correspond closely to human perception of relative loudness.

4.10.3.2 Noise Exposure and Community Noise

Community noise is commonly described in terms of the “ambient” noise level, which is defined as the all-encompassing noise level associated with a given noise environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (L_{eq}) over a given time period (usually one hour). The L_{eq} is the foundation of the L_{dn} noise descriptor, and shows very good correlation with community response to noise. **Table 4.10-5** contains definitions of acoustical terminology used in this section. **Table 4.10-6** shows examples of noise sources that correspond to various sound levels.

TABLE 4.10-5
ACOUSTICAL TERMINOLOGY

Term	Definition
A-weighted	The A-weighted sound level has been shown to correlate with subjective responses and two sounds judged to be of similar loudness would produce similar dBA values, although their unweighted dB values would vary considerably. The A-weighting compares well with other noise sources, therefore it is the most widely used.
Ambient Noise	The distinctive acoustical characteristics of a given space consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.
Attenuation	The reduction of noise.
Decibel or dB	Fundamental unit of sound. A Bell is defined as the logarithm of the ratio of the sound pressure squared over the reference pressure squared. A decibel is one-tenth of a Bell.
CNEL	Community Noise Equivalent Level is defined as the 24-hour average noise level with noise occurring during evening hours (7 p.m. to 10 p.m.) weighted by a factor of three and nighttime hours weighted by a factor of 10 prior to averaging.
L_{dn}	The 24-hour day and night A-weighted noise exposure level that accounts for the greater sensitivity of most people to nighttime noise by weighting noise levels at night (“penalizing” nighttime noises). Noise between 10:00 p.m. and 7:00 a.m. is weighted (penalized) by adding 10 dBA to take into account the greater annoyance of nighttime noises.
L_{eq}	The equivalent sound level is used to describe noise over a specified period of time, typically one hour, in terms of a single numerical value. The L_{eq} is the constant sound level, which would contain the same acoustic energy as the varying sound level, during the same time period (i.e., the average noise exposure level for the given time period).
L_{max}	The highest root-mean-square (RMS) sound level measured over a given period of time.
Source: Appendix T	

TABLE 4.10-6
TYPICAL A-WEIGHTED SOUND LEVELS OF COMMON NOISE SOURCES

Loudness Ratio	Decibels (dBA)	Description
128	130	Threshold of pain
64	120	Jet aircraft take-off at 100 feet
32	110	Riveting machine at operator's position
16	100	Shotgun at 200 feet
8	90	Bulldozer at 50 feet
4	80	Diesel locomotive at 300 feet
2	70	Commercial jet aircraft interior during flight
1	60	Normal conversation speech at 5 to 10 feet
1/2	50	Open office background level
1/4	40	Background level within a residence
1/8	30	Soft whisper at 2 feet
1/16	20	Interior of recording studio
Source: Beranek, 1998.		

The L_{dn} is based upon the average noise level over a 24-hour day, with a +10 dB weighting applied to noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. Additional weight is placed on nighttime readings based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because L_{dn} represents a 24-hour average, it tends to disguise short-term variations in the noise environment. L_{dn} -based noise standards are commonly used to assess noise effects associated with traffic, railroad, and aircraft noise sources.

4.10.3.3 Effects of Noise on People

This analysis focuses on noise and vibration impacts on humans and structures; noise and vibration effects on wildlife are addressed in **Section 4.3**. The effects of noise on people fall into three categories.

- Subjective effects of annoyance, nuisance, and dissatisfaction
- Interference with activities such as speech, sleep, and learning
- Physiological effects such as hearing loss or sudden startling

Environmental noise typically produces effects in the first two categories. Workers in industrial plants can experience noise in the last category. There is no known way to measure the subjective effects of noise or the corresponding reactions of annoyance and dissatisfaction. A wide variation in individual thresholds of annoyance exists, and different tolerances to noise tend to develop based on an individual's past experiences with noise. Human reaction to a new noise can be estimated through comparison of the new noise to the existing ambient noise level within a given environment. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will likely be judged by the recipients. With regard to increases in A-weighted noise levels, the following relationships occur.

- Except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived.

- Outside of the laboratory, a 3-dBA change is considered a just-perceivable difference.
- A change in level of at least 5 dBA is required before any noticeable change in human response would be expected.
- A 10-dBA change is subjectively heard as approximately a doubling in loudness and can cause adverse response.

Noise effects on humans can be physical or behavioral in nature. The mechanism for chronic exposure to noise leading to hearing loss is well established. The elevated sound levels cause trauma to the cochlear structure in the inner ear, which gives rise to irreversible hearing loss. Noise pollution also constitutes a significant factor of annoyance and distraction in modern artificial environments.

Stationary point sources of noise, including stationary mobile sources such as idling vehicles, attenuates at a rate of 6 to 9 dBA per doubling of distance from the source, depending on environmental conditions (i.e., atmospheric conditions and noise barriers, either vegetative or manufactured, etc.). Widely distributed noises, such as a large industrial facility spread over many acres or a street with moving vehicles, would typically attenuate at a lower rate, approximately 4 to 6 dBA.

Roadway traffic noise generally attenuates at a rate of 3 to 4 dBA per doubling of distance; however, to increase the ambient noise level by 3 dBA (threshold which provides a noticeable increase in sound level) there would need to be a doubling of cars on a roadway (Road Traffic Noise, 2007).

Construction noise attenuates at a rate of 6 dBA per doubling of distant from the source. For example, if a piece of construction equipment has a noise rating of 90 dBA at 50 feet, then at 100 feet the noise level would be 84 dBA.

Noise that is measured in dBA cannot be added directly, because the equation that is used to calculate noise levels is a logarithmic function; therefore, when noise levels are added the resulting noise level is not the sum of the two values; in other words, 70 dBA plus 75 dBA is not 145 dBA. The resulting noise level of two noises is estimated by taking the absolute value of the two noises and adjusting the larger by the value shown in **Table 4.10-7**; in other words, 70 dBA plus 75 dBA has an absolute value of 5 dBA which according to the table gives a value of 1 dBA. Thus the resulting noise level is 76 dBA.

TABLE 4.10-7
CRITERIA FOR ADDING TWO NOISE MEASUREMENTS

When two decibel values differ by	Add the following amount to the higher value
0 or 1 dBA	3 dBA
2 or 3 dBA	2 dBA
4 to 9 dBA	1 dBA
10 dBA or more	0 dBA

Source: FHWA, 2011.

Vibration

Vibration is an oscillatory motion through a solid medium in which the amplitude of motion can be described in terms of displacement, velocity, or acceleration. There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal. The PPV is most frequently used to describe vibration impacts to buildings. The RMS amplitude is most frequently used to describe the effect of vibration on the human body. The RMS amplitude is defined as the average of the squared amplitude of the signal. Decibel notation is commonly used to measure RMS. Standards pertaining to perception as well as damage to structures have been developed for vibration in terms of PPV as well as RMS velocities.

Typically, ground-borne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. As vibrations travel outward from the source, they excite the particles of rock and soil they pass through and cause them to oscillate. Differences in subsurface geologic conditions and distance from the source of vibration will result in different vibration levels characterized by different frequencies and intensities. In all cases, vibration amplitudes will decrease with increasing distance.

Human response to vibration is difficult to quantify. Vibration can be felt or heard well below the levels that produce any damage to structures. The duration of the event has an effect on human response, as does frequency. Generally, as the duration and vibration frequency increase, the potential for adverse human response increases.

According to the Transportation and Construction-Induced Vibration Guidance Manual (California Department of Transportation [Caltrans], 2004), operation of construction equipment and construction techniques generate ground vibration. Traffic traveling on roadways can also be a source of such vibration. At high enough amplitudes, ground vibration has the potential to damage structures and/or cause cosmetic damage. Ground vibration can also be a source of annoyance to individuals who live or work close to vibration-generating activities. However, traffic rarely generates vibration amplitudes high enough to cause structural or cosmetic damage.

4.10.3.4 Existing Noise Sources

Ambient Noise

The ambient noise environment within the immediate vicinity of the Project Site is defined primarily by noise from traffic on I-580. During field visits, it was observed that noise generated by the San Rafael Rock Quarry located approximately 3 miles to the northwest was inaudible. Similarly, due to the substantial intervening topography between the Project Site and the Chevron®-Richmond refinery to the east, noise generated by the Chevron®-Richmond refinery was inaudible at the Project Site.

Long-term ambient noise measurements were performed at four locations on the Project Site over five days and nights between July 31, 2019 and August 5, 2019. The long-term noise monitoring locations are shown in **Figure 4.10-1** as Sites 1, 2, 3, and 4. Continuous noise measurements were conducted to describe the day/night distribution of ambient traffic noise levels, and to calculate hourly noise levels and day/night levels. **Table 4.10-8** summarizes the noise measurement results. **Appendix T** presents the detailed noise measurement data in tabular and graphic format.

TABLE 4.10-8
LONG-TERM NOISE LEVEL MEASUREMENT RESULTS

Site	Description	L _{dn}	Average Measured Hourly Noise Levels, dBA			
			Daytime		Nighttime	
			L _{eq}	L _{max}	L _{eq}	L _{max}
1	Western end of Project Site	55 - 58	51 - 53	59 - 64	47 - 52	55 - 61
2	Northern end of Project Site	54 - 55	49 - 51	62 - 65	47 - 48	57 - 60
3	Northern end of Project Site	53 - 56	48 - 50	65 - 69	46 - 49	60 - 65
4	Southern end of Project Site	56 - 58	51 - 54	59 - 62	49 - 51	57 - 60
Source: Appendix T .						

As shown in **Table 4.10-8**, measured average noise levels were highest at Sites 1 and 4. This was most likely due to the proximity of the measurement sites relative to I-580. The noise level measurements conducted at Sites 1-4 were intended to quantify the existing general ambient noise environment within the vicinity of the Project Site, including the noise generation of traffic on I-580.

Four short-term noise measurements were conducted on July 30, 2019, to verify the ambient noise environment at nearby sensitive receptors. The short-term noise-monitoring locations are shown in **Figure 4.10-1** as Sites A, B, C, and D. **Table 4.10-9** summarizes the noise measurement results. **Appendix T** presents the noise measurement data in graphic format.

TABLE 4.10-9
SHORT-TERM NOISE LEVEL MEASUREMENT RESULTS

Site	Description	Time of Day	Measured Noise Levels, dB	
			L _{eq}	L _{max}
A	North of Project Site – Point San Pablo Yacht Harbor	12:00 p.m.	46	60
B	South of Project Site – intersection of Western Drive and Ocean Avenue	1:36 p.m.	58	79
C	South of Project Site – 700 Ocean Avenue	1:57 p.m.	50	69
D	South of Project Site – intersection of Marine Street and Tewksbury Avenue	2:35 p.m.	62	68
Source: Appendix T .				

Results from the short-term noise surveys at Sites A-D (**Table 4.10-9**) indicate that the measured average ambient noise levels ranged from 46 to 62 dB while the maximum noise levels ranged from 60 to 79 dB. Maximum noise levels were caused by local traffic.

Traffic Noise

The FHWA Traffic Noise Model was used to develop existing noise contours expressed in terms of L_{dn} for major roadways within the study area. Intersections identified in this analysis, as shown in **Figure 4.13-1**,



SOURCE: Bollard Acoustical Consultants, Inc., 2019; ; AES, 10/17/2019

Point Molate Mixed-Use Development SEIR / 216544 ■

Figure 4.10-1
Noise and Vibration Measurement Locations

include those where potential increases in traffic generated by the Modified Project are expected. The FHWA model predicts hourly L_{eq} values for free-flowing traffic conditions. Estimates of the hourly distribution of traffic for a typical 24-hour period were used to develop L_{dn} values from L_{eq} values. L_{eq} values were converted to L_{dn} to address increased sensitivity to nighttime noise.

Traffic data in the form of AM and PM peak hour movements for existing conditions in the Project Site roadway network were obtained from the Modified Project TIA completed by Abrams Associates (**Appendix D**). Average daily traffic (ADT) volumes were conservatively estimated by applying a factor of 10 to AM peak hour conditions. Existing ADT volumes for I-580 and Interstate 80 (I-80) were obtained from published Caltrans 2017 traffic counts (**Appendix D**). Using these data and the FHWA model, traffic noise levels were calculated. The traffic noise level at 100 feet from the roadway centerline is summarized in **Table 4.10-10**. Distances from the centerlines of selected roadways to the 60 dB, 65 dB, and 70 dB L_{dn} contours are provided in Table 5 of **Appendix T**.

In many cases, the actual distances to noise level contours may vary from the distances predicted by the FHWA model. Factors such as roadway curvature, roadway grade, shielding from local topography or structures, elevated roadways, or elevated receivers may affect actual sound propagation.

It is also recognized that existing sensitive land uses within the project vicinity are located at varying distances from the centerlines of the local roadway network. The 100-foot reference distance is utilized in this analysis to provide a reference position at which changes in existing and future traffic noise levels resulting from the Modified Project can be evaluated. **Appendix T** contains the FHWA model inputs for existing conditions.

TABLE 4.10-10
EXISTING TRAFFIC NOISE MODELING RESULTS

Intersection		L_{dn} 100 Feet from Roadway
1	Castro St./I-580 Westbound (WB) Ramps	53-65
2	Marine St./E. Standard Ave.	55-59
3	Canal Blvd./I-580 WB Ramps	57-63
4	Canal Blvd./I-580 Eastbound (EB) Ramps	56-62
5	I-580 WB Off-Ramp/Cutting Blvd.	46-61
6	Hoffman Blvd./Cutting Blvd.	55-60
7	Harbour Way S./I-580 WB Ramp	57-61
8	Harbour Way S./Cutting Blvd.	60-61
9	Marina Bay Pkwy./I-580 WB Ramp	36-63
10	Marina Bay Pkwy./I-580 EB Ramp	58-64
11	Marina Bay Pkwy./Cutting Blvd.	62-63
12	I-580 WB Ramp/Regatta Blvd.	53-58
13	Regatta Blvd./Meade St.	50-61
14	Carlson Blvd./Cutting Blvd.	62-63
15	S. 49 th St./Cutting Blvd.	54-63
16	I-80 Southbound/EB Ramp/Cutting Blvd.	60-63
17	Harbour Way/Macdonald Ave.	59-61

Intersection		L _{dn} 100 Feet from Roadway
18	Richmond Pkwy./Macdonald Ave.	31-68
19	Richmond Pkwy./Barrett Ave.	59-68
20	Richmond Pkwy./Hensley St.	34-65
21	Richmond Pkwy./W. Gertrude Ave.	45-69
22	Richmond Pkwy./Parr Blvd.	52-69
23	San Pablo Ave./Richmond Pkwy	63-69
24	Blume Dr./Richmond Pkwy.	63-69
25	I-80 Northbound/EB Ramp/Fitzgerald Dr.	56-61
26	Canal Blvd./W. Ohio Ave.	40-68
27	Chevron®/Stenmark Dr.	43-69
28	Richmond Pkwy./Pittsburg Ave.	45-69
29	Goodrick Ave./Richmond Pkwy.	43-69
30	Castro St./E Standard Dr.	56-58
31*	I-580 – Toll Area to County Line	75
32*	I-580 – Bayview Ave. to Erlandson St.	76
33*	I-80 – North of Richmond Pkwy.	82
34*	I-80 – South of Richmond Pkwy.	82
*Segments not included in traffic impact study. Source: FHWA-RD-77-108 with inputs from Abrams Associates and Caltrans traffic counts. A complete listing of traffic model inputs for existing conditions is provided in Appendix B-1 of Appendix T .		

4.10.3.5 Existing Vibration Sources

During a site visit on July 30, 2019, vibration levels were below the threshold of perception at the Project Site. Nonetheless, to quantify existing baseline vibration levels within the vicinity of the Project Site, short-term (10 minute) vibration measurements were conducted within and near the Project Site. The vibration measurements were conducted at long-term noise measurement Sites 1-4 as well as at the short-term noise measurement Sites A-D, shown on **Figure 4.10-1**. The results are summarized in **Table 4.10-11**.

TABLE 4.10-11
AMBIENT VIBRATION MONITORING RESULTS – JULY 30, 2019

Site	Time of Day	Average Measured Vibration Level, PPV (inches/second)
1	10:46 a.m.	<0.001
2	10:08 a.m.	<0.001
3	10:28 a.m.	0.009
4	11:09 a.m.	<0.001
A	12:01 p.m.	<0.001
B	1:36 p.m.	<0.001
C	1:58 p.m.	<0.001
D	2:16 p.m.	<0.001
Source: Appendix T		

The data in **Table 4.10-11** indicates that measured average vibration levels within the Project Site (Sites 1-4) ranged from less than 0.001 to 0.009 inches/second PPV, while measured average vibration levels in the immediate Project Site vicinity (Sites A-D) were less than 0.001 inches/second PPV.

4.10.3.6 Sensitive Receptors

Noise-sensitive receptors are generally defined as locations where people reside or where the presence of unwanted sound could adversely affect the primary intended use of the land. Places where people live, sleep, recreate, worship, and study are generally considered to be sensitive to noise because intrusive noise can be disruptive to these activities.

The nearest noise-sensitive receptors to the Project Site consist of a residential neighborhood and boat residences. The residential neighborhood is located approximately 1 mile to the southeast of the Project Site. The boat residences are located at Point San Pablo Yacht Harbor, approximately 0.50 mile to the north of the Project Site. **Figure 4.10-1** shows the locations of these receptors. Both the residential neighborhood and boat residences are substantially shielded from the Project Site by intervening topography.

4.10.4 2011 FEIR ANALYSIS

This section provides a summary of the impacts to noise conditions analyzed for the Casino Project of the 2011 FEIR followed by a description of changes that have occurred since the 2011 FEIR related to noise.

4.10.4.1 2011 FEIR Summary of Impacts

Impacts

The 2011 FEIR determined that noise and vibration from construction activities of the Casino Project could result in a temporary increased ambient noise level. However, noise and vibration impacts from construction activities would have been temporary in nature and the distance to the closest sensitive receptor at the Project Site was far enough to lessen these impacts. Furthermore, mitigation listed in Section 5.2.10 of the 2011 FEIR was identified that would lessen these noise changes further despite the less-than-significant noise level. The 2011 FEIR determined that the impact was less than significant.

Noise and vibration from the operational activities of the Casino Project could have resulted in increased ambient noise level due to traffic; heating, ventilating, and air conditioning (HVAC) operation; and refuse handling. While the distance to the closest sensitive receptor was far enough to lessen the noise impacts from these activities, the ambient noise levels along Stenmark Drive would increase above the City's noise standards due to the increased traffic. This would have been a potentially significant impact. Implementation of mitigation measures in Section 5.2.10 of the 2011 FEIR, including the use of sound barriers, would reduce the ambient noise level (see **Appendix K**). Therefore, the FEIR determined ambient noise increases from the operation of the Casino Project were a less-than-significant impact.

For alternatives with more adverse impacts than the Casino Project, Alternatives B, B1, and D during operation activities could have resulted in increased ambient noise level at on-site residential noise receptors. The 2011 FEIR determined these impacts to be less than significant.

Cumulative Impacts

The 2011 FEIR determined that the noise generated from the operational activities of the Casino Project in combination with other developments in the year 2025 would have resulted in increased ambient noise

levels due to traffic, HVAC, and refuse handling. Noise impacts from HVAC operation and refuse handling were found to be a less-than-significant cumulative impact given the distance to the closest sensitive receptor from the Project Site. Furthermore, while the ambient noise levels along Stenmark Drive would have increased above the City's noise standards and be a potentially significant impact, no off-site sensitive receptors were present along Stenmark Drive; therefore, the 2011 FEIR determined a less-than-significant cumulative impact.

Residential and commercial/retail uses under the Casino Project were determined to not ordinarily include sources of perceptible vibration. Therefore, the 2011 FEIR determined that the cumulative impact from vibration would be less than significant.

4.10.4.2 Changes Since the 2011 FEIR

The 2011 FEIR reported average ambient noise levels in the vicinity of the Project Site ranging from approximately 50 to 62 dB. This is generally consistent with average ambient noise levels reported above.

Since the 2011 FEIR was prepared, the RMC Community Noise Ordinance (RMC § 9.52.100) was revised. Noise standards are presented in **Section 4.10.2.3**. No other relevant regulatory changes have occurred.

Appendix G of the California Environmental Quality Act (CEQA) Guidelines was updated in 2018. The number of significance thresholds for noise impacts have been reduced since the 2011 FEIR from six to three, but their objectives were essentially maintained through combining them with other significance thresholds. Therefore, the content of the significance thresholds was largely remained the same despite the reduction in significance thresholds.

The City adopted a new General Plan in 2012. This General Plan has reorganized and the content pertaining to noise was revised. While the content has primarily remained the same, the General Plan does not contain as much content pertaining to preparing noise study reports in certain situations. Instead, there is a new emphasis on using improvements in technology and/or appropriate technology to reduce noise impacts overall and supporting traffic improvement projects that could reduce noise.

4.10.5 IMPACTS

4.10.5.1 Thresholds of Significance

Criteria for determining the significance of noise impacts have been developed based on Appendix G of the CEQA Guidelines and relevant agency thresholds. Impacts associated with noise would be considered significant if the Modified Project would result in any of the following.

- Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies
- Generation of excessive ground-borne vibration or ground-borne noise levels

- For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working on the Project Site to excessive noise levels

The RMC Community Noise Ordinance standards are described in **Section 4.10.2.3** and **Table 4.10-2**.

4.10.5.2 Method of Analysis

This section identifies any noise impacts that could occur from construction and operation of the Modified Project. Noise impacts are assessed by comparing the noise levels resulting from the Modified Project to the noise thresholds in the RMC Community Noise Ordinance (see **Section 4.10.2.3**). This analysis focuses on the manner in which development could alter noise compared to existing conditions, as well as cumulative conditions. Noise from traffic (see the analysis in **Section 4.13** regarding traffic) and daytime operations would be greater under Option 2 (Commercial-Heavy Option), and therefore Option 2 is analyzed in this chapter.

Analysis of temporary construction noise effects is based on typical construction phases and equipment noise levels; attenuation of those noise levels due to distances; and barriers between the construction activity and the sensitive receptors near the sources of construction noise. Operational impacts are analyzed based on anticipated noise levels, as attenuated by distance or sound shielding.

The methodology for assessing noise and vibration impacts is described below.

Analysis Scenarios

The traffic noise impacts associated with the Modified Project have been evaluated under existing and future conditions. The following traffic scenarios have been analyzed:

- *Existing Conditions* – Traffic noise levels based on existing, 2019 traffic volumes.
- *Existing Plus Project* – Existing traffic noise levels plus traffic noise levels from the Modified Project.
- *Cumulative Conditions* – This scenario includes traffic noise levels based on year 2040 cumulative traffic volumes including planned and approved projects from the Countywide Travel Demand Model.
- *Cumulative Plus Project Conditions* – This scenario is based on the cumulative traffic noise levels plus traffic noise levels from the Modified Project.

Determining whether Noise Increases are Substantial

The Modified Project's noise impacts were evaluated relative to both the *increase* in noise level which would result from the Modified Project as well as compliance with the locally adopted *maximum* noise standards.

The City does not have a specific policy or standard for assessing noise impacts associated with *increases* in ambient noise levels from project-generated sources. Specifically, no numeric thresholds for assessing whether project-related *increases* in ambient noise levels are substantial are provided within

the General Plan Noise Element, Noise Ordinance, or Zoning Code. The General Plan and City Ordinances do contain specific numeric standards for *maximum* acceptable noise exposure, but they do not contain numeric standards for *increases* in noise associated with a project. The following section describes criteria for assessing whether project-related increases are substantial, using federal research conducted by FICON.

The FICON has developed a graduated scale for use in the assessment of project-related noise level increases. The criteria shown in **Table 4.10-12** was developed by FICON as a means of developing thresholds for impact identification for project-related noise level increases. As shown in **Table 4.10-12**, in areas with higher existing ambient noise levels, a smaller increase in ambient noise is more substantial.

TABLE 4.10-12
SIGNIFICANCE OF CHANGES IN CUMULATIVE NOISE EXPOSURE

Ambient Noise Level Without Project (L_{dn} or CNEL)	Change in Ambient Noise Level Due to Project
<60 dB	+5.0 dB or more
60 to 65 dB	+3.0 dB or more
>65 dB	+1.5 dB or more

Source: **Appendix T**.

The use of the FICON standards are considered conservative relative to thresholds used by other agencies in the State of California. For example, Caltrans requires a project-related traffic noise level increase of 12 dB for a finding of significance, and the California Energy Commission considers project-related noise level increases between 5 to 10 dB significant, depending on local factors. Therefore, the use of the FICON standards, to determine whether increases in ambient noise are substantial, provides a very conservative approach to impact assessment for this project.

Traffic Vibration Thresholds

The Caltrans criteria applicable to damage and annoyance potential from transient and continuous vibration that is usually associated with construction activity are presented in **Tables 4.10-13** and **4.10-14**. Equipment or activities typical of continuous vibration include: excavation equipment, static compaction equipment, tracked vehicles, traffic on a highway, vibratory pile drivers, pile-extraction equipment, and vibratory compaction equipment. Equipment or activities typical of single-impact (transient) or low-rate repeated impact vibration include: impact pile drivers, blasting, drop balls, “pogo stick” compactors, and crack-and-seat equipment (Caltrans, 2013).

4.10.5.3 Noise Within the Project

To address existing and future noise conditions impacting the Modified Project, assessment of future traffic, commercial operations, and construction-related noise exposure to the Modified Project's proposed noise-sensitive receptors is necessary to confirm compliance to the City's noise requirements. Due to this analysis not being mandatory under CEQA, the noise exposure of the Modified Project's future users or residents is for informational purposes.

TABLE 4.10-13
VIBRATION DAMAGE POTENTIAL THRESHOLD CRITERIA

Structure and Condition	Maximum PPV (inches/second)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.20	0.10
Historic and some old buildings	0.50	0.25
Older residential structures	0.50	0.30
New residential structures	1.00	0.50
Modern industrial/commercial buildings	2.00	0.50
Note: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment. Source: Caltrans, Transportation and Construction Vibration Guidance Manual (2013).		

TABLE 4.10-14
VIBRATION ANNOYANCE POTENTIAL CRITERIA

Human Response	Maximum PPV (inches/second)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Barely perceptible	0.40	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.90	0.10
Severe	2.00	0.40
Note: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment. Source: Caltrans, Transportation and Construction Vibration Guidance Manual (2013).		

4.10.5.4 Effects Found Not to be Significant Without Further Analysis

Review and comparison of the existing setting conditions and the Modified Project characteristics with the significance criteria clearly show that no impacts would be associated with the following criterion for the reasons stated below.

The Modified Project would not result in significant impacts related to exposure of people to excessive noise levels based on proximity to public airports or private airstrips.

The Modified Project would not result in significant impacts related to exposure of people to excessive noise levels based on proximity to public airports or private airstrips. The Project Site is not located within the vicinity of a private airstrip, airport land use plan, or within 2 miles of a public airport; therefore, further discussion of this issue is not included within this Draft SEIR.

The Modified Project would not result in significant impacts related to ambient noise or ground-borne noise during the operation of the off-site infrastructure.

The Modified Project would not result in significant impacts related to ambient noise or ground-borne noise during the operation of the off-site infrastructure. The off-site infrastructure includes utilities improvements and the widening of Stenmark Drive. The utility improvements would not generate noise or ground-borne vibrations during operation. Therefore, the discussion of utility-related off-site infrastructure improvements is not included within this Draft SEIR. The widening of Stenmark Drive would allow additional traffic into the Project Site, and this impact is examined within impacts from traffic-related noise.

4.10.5.5 Project-Level Impacts

IMPACT 4.10.1	GENERATION OF A SUBSTANTIAL TEMPORARY OR PERMANENT INCREASE IN AMBIENT NOISE LEVELS FROM CONSTRUCTION OF THE PROJECT IN EXCESS OF STANDARDS ESTABLISHED IN THE LOCAL GENERAL PLAN OR NOISE ORDINANCE, OR APPLICABLE STANDARDS OF OTHER AGENCIES
Significance Before Mitigation	Potentially Significant (for Construction of Off-Site Improvements)
Mitigation Measures	Modified Project Mitigation: MM 4.10-1
Significance After Mitigation	Less Than Significant
Comparison with 2011 FEIR	No New or Substantially More Significant Impacts

Project Site

During Modified Project construction, heavy equipment would be used for grading excavation, paving, and building construction, which would increase ambient noise levels when in use. Noise levels would vary depending on the type of equipment used, how it is operated, and how well it is maintained. Noise exposure at any single point outside the work area would also vary depending upon the proximity of equipment activities to that point. The Modified Project would implement the following measures based on RMC requirements.

- All construction equipment powered by internal combustion engines shall be properly muffled and maintained. (RMC § 9.52.060).
- Prohibit the unnecessary idling of internal combustion engines. (RMC § 9.52.060).
- All stationary noise-generating construction equipment such as tree grinders and air compressors are to be located as far as is practical from existing residences. (RMC § 9.52.060).
- Quiet construction equipment, particularly air compressors, are to be selected whenever possible. (RMC § 9.52.060).
- Use of pile drivers, sources of impulsive sound and jack hammers shall be prohibited on Sundays and holidays, except for emergencies or as approved in advance by the Building Official. (RMC § 9.52.060).
- General construction activities should be limited to daytime hours (7:00 a.m. to 6:00 p.m.), Monday through Friday and pile driving and similar loud activities shall be limited to weekdays

from 8:00 a.m. to 5:00 p.m. Pre-construction activities, including loading and unloading, cleaning of mechanical toilets, deliveries, truck idling, backup beeps, yelling, and radios also are limited to these construction hours. (RMC § 15.04.605.060).

- No noise-producing construction activities shall be permitted outside of these hours or on Sundays and federal holidays unless a temporary waiver is granted by the Building Official or his or her authorized representative. (RMC § 15.04.605.060).
- Trucks, vehicles, and equipment that are making or are involved with material deliveries, loading or transfer of materials, equipment service, maintenance of any devices or appurtenances for or within any construction project in the City shall not be operated or driven on City streets outside of these hours or on Sundays and federal holidays unless a temporary waiver is granted by the Building Official. (RMC § 15.04.605.060).

The nearest noise-sensitive receptors to the proposed planning areas where construction would occur have been identified as boat residences at the Point San Pablo Yacht Harbor (north) and a residential development (southeast). The Point San Pablo Yacht Harbor and nearest residence to the south are located approximately 3,200 and 5,500 feet from construction activities which would occur within the Project Site, respectively.

Between the Project Site and the San Pablo Yacht Harbor, there is an existing hill measuring 229 feet above sea level which would provide substantial shielding of project construction activities (**Appendix T**). Using industry standard algorithms for computing attenuation due to topographic shielding, the Noise Study estimated that this intervening hill would reduce construction noise by 19 dBA at the Yacht Harbor.

Between the Project Site and the nearest existing residences in Point Richmond located over a mile away, there is an existing hill measuring 197 feet above sea level which would provide substantial shielding of project construction activities (**Appendix T**). Using industry standard algorithms for computing attenuation due to topographic shielding, the Noise Study estimated this intervening hill would also reduce on-site Modified Project construction noise by 19 dBA at these nearest residences.

Table 4.10-15 includes the range of maximum noise levels for equipment commonly used in general construction projects at full-power operation at a distance of 50 feet. Not all of these construction activities would be required of the Modified Project. The data in **Table 4.10-15** also includes predicted maximum equipment noise levels at the nearest identified sensitive receptors to the proposed planning areas located approximately 3,200 and 5,500 feet away, which assume a standard spherical spreading loss of 6 dB per doubling of distance.

The construction noise levels shown in **Table 4.10-15** do not include the aforementioned 19 dB of additional construction noise attenuation which would be provided by intervening topography. Even without consideration of that shielding, worst-case project construction equipment noise exposure from transportation improvements along Stenmark Drive are expected to range from less than 20 dB to approximately 44 dB – which would be well below measured ambient noise levels at the nearest residences. After inclusion of the additional 19 dBA of attenuation provided by intervening topography, construction noise levels would be imperceptible at the nearest receptors (**Appendix T**).

TABLE 4.10-15
TYPICAL CONSTRUCTION EQUIPMENT NOISE – PROJECT SITE

Equipment Description	Maximum Noise Level at 50 Feet, dBA	Predicted Maximum Noise Level, dBA	
		At 3,200 Feet	At 5,500 Feet
Auger drill rig	85	49	44
Backhoe	80	44	39
Bar bender	80	44	39
Boring jack power unit	80	44	39
Compactor (ground)	80	44	39
Compressor (air)	80	44	39
Concrete batch plant	83	47	42
Concrete mixer truck	85	49	44
Concrete pump truck	82	46	41
Concrete saw	90	54	49
Crane (mobile or stationary)	85	49	44
Dozer	85	49	44
Dump truck	84	48	43
Excavator	85	49	44
Flatbed truck	84	48	43
Front end loader	80	44	39
Generator (more than 25 kVA)	82	46	41
Grader	85	49	44
Hydra break ram	90	54	49
Jackhammer	85	49	44
Mounted impact hammer	90	54	49
Paver	85	49	44
Pickup truck	55	<20	<20
Pneumatic tools	85	49	44
Pumps	77	41	36
Rock drill	85	49	44
Scraper	85	49	44
Soil mix drill rig	80	44	39
Tractor	84	48	43
Vacuum street sweeper	80	44	39
Vibratory concrete mixer	80	44	39
Notes: kVA = kilo-volt-ampere. Source: FHWA, 2006.			

Furthermore, worst-case project construction noise exposure at the nearest sensitive receptors is also expected to be well below applicable City noise level limits for single-family residential uses (65 dB). As a result, this impact would be less than significant.

Construction of the Bay Trail

Impacts as a result of the construction and implementation of the San Francisco Bay Trail (Bay Trail) are analyzed within the Bay Trail Initial Study/Mitigated Negative Declaration (IS/MND), which is incorporated by reference, as described within **Section 1.4.4**. The Bay Trail IS/MND determined that impacts from the construction of the Bay Trail on the generation of a substantial temporary or permanent increase in ambient noise levels from construction in excess of standards established in the local general plan or noise ordinance, were less than significant because construction equipment noise is not allowed within the boundary of a residential zone between the hours of 10 p.m. and 7 a.m. the next day and noises would be required to comply with the Community Noise Ordinance, which limits construction hours. As a result, construction of the Bay Trail would not result in the generation of a substantial temporary or permanent increase in ambient noise levels due to the requirement to comply with the Community Noise Ordinance and the impact would be less than significant.

Off-Site Improvements

The Modified Project may include the widening of Stenmark Drive from the eastern Project Site boundary to the I-580 connection. Heavy equipment associated with these activities would increase ambient noise levels when in use. Noise levels would vary depending on the type of equipment used, how it is operated, and how well it is maintained. Noise exposure at any single point outside the Modified Project work area would also vary depending upon the proximity of equipment activities to that point. The nearest existing noise-sensitive receptors to the transportation and/or utility infrastructure improvement work area along Stenmark Drive have been identified as residences to the southeast. Specifically, the nearest residence of this neighborhood maintains a separation of approximately 2,000 feet from Modified Project work area along Stenmark Drive.

Table 4.10-16 includes the range of maximum noise levels for equipment commonly used in roadway improvement projects at full-power operation at a distance of 50 feet. The **Table 4.10-16** data also include predicted maximum equipment noise levels at the nearest identified sensitive receptors to the work area located approximately 2,000 feet away, which assume a standard spherical spreading loss of 6 dB per doubling of distance.

TABLE 4.10-16
TYPICAL CONSTRUCTION EQUIPMENT NOISE – OFF-SITE

Equipment Description	Typical Maximum Noise Level at 50 Feet, dBA	Predicted Maximum Noise Level at 2,000 Feet, dBA
Concrete mixer truck	85	53
Concrete saw	90	58
Dump truck	84	52
Flatbed truck	84	52
Front end loader	80	48
Generator (more than 25 kVA)	82	50
Paver	85	53
Pickup truck	55	23

Source: FHWA, 2006.

Based on the equipment noise levels in **Table 4.10-16**, the results from the short-term noise measurements at Site B (**Table 4.10-9**), and including consideration of significant screening that would be

provided by intervening topography (conservatively assumed provide a minimum of 10 dB of noise level reduction), worst-case project construction equipment noise exposure from transportation improvements along Stenmark Drive are expected to range from less than 20 dB to approximately 48 dB – which would be well below measured ambient noise levels at the nearest residences. Further, worst-case noise exposure from Stenmark Drive transportation improvements at the nearest sensitive receptors is also expected to be well below applicable City noise level limits for single-family residential uses (65 dB). As a result, this impact is less than significant.

The Modified Project may also include the undergrounding or relocating of utility power poles, the installation of a new force main, and the installation of one or more new lift stations. The work would primarily occur along Stenmark Drive from the eastern Project Site boundary to the I-580 connection. Heavy equipment associated with these activities would increase ambient noise levels when in use. Noise levels would vary depending on the type of equipment used, how it is operated, and how well it is maintained. Noise exposure at any single point outside the Modified Project work area would also vary depending upon the proximity of equipment activities to that point.

The nearest existing noise-sensitive receptors to the wastewater infrastructure improvement work areas have been identified as residences along Western Drive, Tewksbury Avenue, Ocean Drive, and Marine Street – located as close as 50 feet away. As indicated in **Table 4.10-16**, maximum noise levels for commonly used heavy construction equipment ranges from 55 to 90 dB at a distance of 50 feet. Although noise levels in those ranges would generally fall within the range of measured maximum noise levels at the nearest residences (Sites B-D), it is possible that a portion of the heavy equipment associated with Modified Project wastewater treatment infrastructure improvements could result in temporary short-term increases over ambient maximum noise levels at those residences. Further, it is possible that those noise levels could exceed the applicable City noise level limits. Therefore, this impact is considered to be potentially significant. Implementation of **Mitigation Measure 4.10-1**, as described in **Section 4.10.6** below, would reduce the impact to a less-than-significant level.

IMPACT 4.10.2	GENERATION OF A SUBSTANTIAL TEMPORARY OR PERMANENT INCREASE IN AMBIENT NOISE LEVELS FROM OPERATION OF THE PROJECT IN EXCESS OF STANDARDS ESTABLISHED IN THE LOCAL GENERAL PLAN OR NOISE ORDINANCE, OR APPLICABLE STANDARDS OF OTHER AGENCIES
Significance Before Mitigation	Less Than Significant
Mitigation Measures	None Required
Significance After Mitigation	Not Applicable
Comparison with 2011 FEIR	No New or Substantially More Significant Impacts

Traffic Noise Impacts

With development of the Project Site, traffic volumes on the local roadway network would increase. Those increases in daily traffic volumes would result in a corresponding increase in traffic noise levels at existing

uses located along those roadways. The FHWA Model was used with traffic input data provided by Abrams Associates (**Appendix D**) to predict project traffic noise level increases relative to Existing, Baseline, and Cumulative project and no-project conditions.

Increases in Freeway Traffic Noise Levels

According to the trip generation summary performed by Abrams Associates, the proposed project would generate approximately 1,000 peak hour vehicle trips – which equates to approximately 11,000 vehicle trips per day. The transportation impact analysis indicates that the highest percentage of Modified Project trip distribution on I-580 will occur on the Bayview Avenue to Erlandson Street section of roadway (41 percent of the total Modified Project traffic or approximately 4,500 daily vehicle trips). In addition, the highest percentage of Modified Project trip distribution on I-80 will occur north of Richmond Parkway (16 percent or approximately 1,750 daily vehicle trips). Published Caltrans traffic counts for the year 2017 indicate those segments of I-580 and I-80 currently experience average daily traffic volumes of approximately 100,000 and 198,000, respectively. Relative to above-mentioned existing I-580 and I-80 volumes and trip distributions, the associated increases in traffic noise levels resulting from the Modified Project computes to 0.19 dBA for I-580 and 0.03 dBA for I-80. The increases would be well below the FICON criteria provided in **Table 4.10-12**. Therefore, off-site traffic noise impacts related to increases in traffic along I-580 and I-80 due to the Modified Project are less than significant.

Increases in Existing Traffic Noise Levels

Existing versus Existing Plus Project traffic noise levels on the local roadway network are shown in Table 9 of **Appendix T**. The following section includes an assessment of predicted traffic noise levels relative to the FICON increase significance noise criteria identified in **Table 4.10-12**. The data in Table 9 of **Appendix T** indicate that the contribution by the Modified Project to traffic noise level increases is predicted to exceed the FICON substantial increase criteria along the following roadway segments evaluated in the existing conditions analysis.

- East of Chevron® and Stenmark Drive
- West of Chevron® and Stenmark Drive

The roadway segments east and west of the Chevron® and Stenmark Drive intersection are predicted to have existing plus project traffic noise levels of approximately 61 and 60 dB L_{dn} at a distance of 100 feet from the roadway centerline, respectively. However, additional analysis of those roadway segments revealed that they are located within industrial areas – for which the General Plan and RMC establish a normally acceptable noise level standard of 75 dB L_{dn} . Further, no residences or other sensitive land uses were identified along those roadway segments.

Because the predicted existing plus project noise levels are well within compliance of the applicable General Plan and RMC noise level limits along the roadways containing substantial noise level increases, and because there are no identified sensitive receptors along those roadway segments, off-site traffic noise impacts related to increases in traffic resulting from the implementation of the Modified Project are identified as being less than significant.

Operational Noise Impacts

Commercial Operations

According to **Section 3.0**, the Modified Project would contain commercial and residential uses. One primary noise source associated with commercial and multi-family residential uses is roof-mounted air handling units associated with building HVAC. Single-family residences and townhomes also produce noise from HVAC units, but at lower levels. The other primary noise source associated with commercial and residential uses is from refuse collection.

Commercial and multi-family uses would bring the possibility of noise conflicts due to operations of roof-mounted air handling units associated with building HVAC equipment. The noise levels produced by HVAC systems vary with the capacities of the units as well as with individual unit design. The nearest identified existing noise-sensitive receptor is located approximately 3,800 feet from the nearest proposed commercial/multi-family residential uses within the Project Site. At this distance, Modified Project HVAC noise levels would be immeasurable over the ambient noise environment at the closest sensitive receptor. As a result, this impact would be less than significant.

The proposed commercial and residential uses would also include refuse collection activities. Noise levels due to typical refuse trucks may be as high as 84 dB at a distance of 50 feet. Noise conflicts may arise when garbage pickup occurs adjacent to proposed residential uses at nighttime or in the early morning. Nighttime refuse handling could produce noise levels affecting sleep. The nearest identified existing noise-sensitive receptor is located approximately 3,800 feet from the nearest proposed new use within the Project Site. At this distance, Modified Project refuse collection noise levels would be immeasurable over the ambient noise environment at the closest sensitive receptor. As a result, this impact would be considered less than significant.

On-Site Wastewater Treatment Facility

Under Wastewater Treatment Variant A (described in **Section 3.4.6.2**), the Modified Project would include the installation of a new on-site sanitary sewer treatment facility. The new on-site facility, which would be located at the southern end of the Project Site, would operate as a standalone treatment system for the sanitary sewer needs of the Modified Project.

The Water and Wastewater Master Plan (**Appendix E**) indicates that the on-site wastewater treatment facility would be located approximately 1 mile away from the nearest existing sensitive receptor. According to the Noise Study (**Appendix T**), typical noise levels from a similar wastewater treatment plant are expected to be approximately 50 dBA at a distance of 500 feet. At the nearest residences located 1 mile away, noise exposure from normal operations at the on-site wastewater treatment facility would be approximately 30 dBA prior to consideration of shielding from intervening topography. After consideration of such shielding, operational noise levels would be immeasurable over the ambient noise environment at the closest sensitive receptor and completely inaudible. Therefore, this impact is less than significant.

IMPACT 4.10.3	GENERATION OF EXCESSIVE GROUND-BORNE VIBRATION OR GROUND-BORNE NOISE LEVELS
Significance Before Mitigation	Significant for Historic Resources
Mitigation Measures	Modified Project Mitigation: MM 4.10-2
Significance After Mitigation	Less Than Significant
Comparison with 2011 FEIR	No New or Substantially More Significant Impacts

Construction Vibration Impacts

During project construction, heavy equipment would be used for grading excavation, paving, and building construction, which would generate localized vibration in the immediate vicinity of the construction. As mentioned previously, the nearest sensitive receptors are located approximately 3,200-5,500 feet from construction activities that would occur within the Project Site.

Table 4.10-17 includes the range of vibration levels for equipment commonly used in general construction projects at a distance of 50 feet. The data in **Table 4.10-17** also include predicted equipment vibration levels at the nearest identified sensitive receptors to the proposed planning areas located approximately 3,200 and 5,500 feet away.

TABLE 4.10-17
VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT

Equipment	Maximum PPV (inches/second)		
	Maximum PPV at 50 Feet ¹	Predicted PPV at 3,200 Feet	Predicted PPV at 5,500 Feet
Hoe ram	0.0315	<0.0001	<0.0001
Large bulldozer	0.0315	<0.0001	<0.0001
Caisson drilling	0.0315	<0.0001	<0.0001
Loaded trucks	0.0269	<0.0001	<0.0001
Jackhammer	0.0124	<0.0001	<0.0001
Small bulldozer	0.0011	<0.0001	<0.0001
¹ Reference vibration level obtained from the Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual (2018).			

Vibration levels generated from on-site construction activities at the nearest off-site sensitive receptors are predicted to be well below the Caltrans thresholds for damage to structures of 0.5 inches/second PPV shown in **Table 4.10-13**. Further, the predicted vibration levels are well below the Caltrans thresholds for annoyance presented in **Table 4.10-14**. Therefore, on-site construction within the Project Site would not result in excessive ground-borne vibration levels at nearby existing off-site sensitive receptors.

As indicated in **Table 4.10-11**, the measured average vibration levels within the Project Site and in the immediate project vicinity were well below the Caltrans criteria (ranged from less than 0.0001 to 0.009 inches/second PPV). Therefore, the Modified Project would not result in the exposure of persons to excessive ground-borne vibration levels at the project site. Because vibration levels due to and upon the

proposed project would satisfy the Caltrans ground-borne impact vibration criteria, this impact would be considered less than significant.

Historic Resources

As described in **Section 3.4.1** the Modified Project includes construction within the Historic Winehaven District (Historic District). Vibration levels generated from on-site construction activities have the potential to impact historic resources within the Historic District. As shown in **Table 4.10-13**, Caltrans has established vibration damage thresholds for extremely fragile historic buildings. Vibration levels generated from on-site construction activities at a distance of 50 feet are predicted to be below the Caltrans threshold of 0.08 inches/second PPV for damage to extremely fragile historic buildings. However, on-site construction activities within the Historic District may occur less than 50 feet from historic resources. Therefore, vibration levels generated from on-site construction activities could result in significant impacts historic resources.

Implementation of **Mitigation Measure 4.10-2** would require a pre-construction survey and structural integrity inspection to determine the appropriate vibration damage threshold that should be applied to the historic resources within the Historic District. Additionally, vibration monitoring would be required during all construction activities within the Historic District. Implementation of **Mitigation Measure 4.10-2** would reduce the impacts from construction-related vibration on historic resources to a less-than-significant level.

Construction of the Bay Trail

Impacts as a result of the construction and implementation of the Bay Trail are analyzed within the Bay Trail IS/MND, which is incorporated by reference, as described within **Section 1.4.4**. The Bay Trail IS/MND determined that impacts from the construction of the Bay Trail on the generation of excessive ground-borne vibration or ground-borne noise levels were less than significant because construction activities would be temporary and would not occur at any boundary of a residential zone between the hours of 10 p.m. and 7 a.m. the next day under the City's Community Noise Ordinance. As a result, construction of the Bay Trail would not result in generation of excessive ground-borne vibration or ground borne noise levels and the impact would be less than significant.

Off-Site Infrastructure Improvements

During project transportation and wastewater treatment infrastructure improvements, heavy equipment would be used, which would generate localized vibration in the immediate vicinity of the construction. The worst-case vibration exposure from off-site heavy equipment activities would occur at the sensitive receptors (residences) located along Western Drive, Tewksbury Avenue, Ocean Drive, and Marine Street – located as close as 50 feet away.

According to the reference vibration levels for construction equipment presented in **Table 4.10-17**, vibration levels associated with typical construction equipment range from 0.0011 to 0.0315 at a distance of 50 feet. Based on this data, vibration levels generated from activities within the off-site infrastructure improvement work areas would be below the Caltrans thresholds for damage to structures of 0.5 in/sec PPV at the nearest sensitive receptors. Data in **Table 4.10-17** further indicates that vibration

exposure at the nearest receptors would be below the Caltrans thresholds for annoyance. Because vibration level exposure due to the project would satisfy the Caltrans ground-borne impact vibration criteria, this impact would be considered less than significant.

4.10.5.6 Noise Within the Project

IMPACT 4.10.4	FUTURE TRAFFIC NOISE LEVELS AT PROJECT SENSITIVE RECEPTORS
Significance Before Mitigation	Potentially Significant
Mitigation Measures	Modified Project Mitigation: MM 4.10-3
Significance After Mitigation	Less Than Significant
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

This impact is relative to the applicable City noise level limits for project-created sensitive receptors in the Modified Project location. Future traffic noise exposure on the segment of Stenmark Road that runs through the Project Site is predicted to be approximately 60 dB L_{dn} at a distance of 100 feet from the roadway centerline where residential uses could be constructed. Traffic noise levels could cause ambient noise levels to exceed the exterior noise normally acceptable levels at low density residences located along this segment of Stenmark Drive, but would not exceed the conditionally acceptable noise for such uses or the normally acceptable noise level for multi-family residential units. When exterior ambient noise exposure would be greater than the normally acceptable level, the City requires an acoustic study and implementation of appropriate noise attenuation measures. (RMC § 15.04.605.050.)

To ensure City noise requirements are met, **Mitigation Measure 4.10-3** requires preparation of a building-specific noise impact study and implementation appropriate noise attenuation measures if exterior noise levels would exceed the normally acceptable noise levels when low-density residential uses are proposed along Stenmark Drive. The noise study would be required to be conducted after the proposal for development of residential uses is filed. Implementation of **Mitigation Measure 4.10-3** would reduce the impact to a less-than-significant level.

IMPACT 4.10.5	PROJECT COMMERCIAL NOISE LEVELS AT PROPOSED SENSITIVE RECEPTORS
Significance Before Mitigation	Potentially Significant
Mitigation Measures	Modified Project Mitigation: MM 4.10-4
Significance After Mitigation	Less Than Significant
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

Commercial and multi-family components of the Modified Project bring the possibility of noise impacts associated with roof-mounted air handling units used for building HVAC. In addition, commercial and multi-family buildings can have loading and unloading areas and refuse areas that generate noise during garbage collection. Implementation of **Mitigation Measure 4.10-4** would require commercial and multi-family buildings to comply with certain noise attenuation measures, including screening HVAC equipment. Implementation of **Mitigation Measure 4.10-4** would reduce the potential for rooftop HVAC noise to bother residents and reduce the impact to a less-than-significant level.

IMPACT 4.10.6	PROJECT WASTEWATER TREATMENT FACILITY OPERATIONAL NOISE AT PROPOSED SENSITIVE RECEPTORS
Significance Before Mitigation	Potentially Significant
Mitigation Measures	Modified Project Mitigation: MM 4.10-5
Significance After Mitigation	Less Than Significant
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

The Modified Project includes the option of installing a new on-site sanitary sewer treatment facility located on the southern end of the Project Site, approximately 350 feet from the nearest proposed residential uses. Noise generated from this treatment facility could exceed applicable noise level limits established by the City at the Modified Project's nearby sensitive receptors, depending on how the treatment facility equipment is configured.

Mitigation Measure 4.10-5 requires preparation of a site-specific noise impact study analyzing the facility operational equipment noise level to be conducted once the installment of this facility has been confirmed and building plans are filed, as well as implementation of specific mitigation measures to address any noise exceedances identified in the study. Implementation of **Mitigation Measure 4.10-5** would reduce the noise impacts related to exposure of future residents to Modified Project wastewater treatment facility operational noise over thresholds to a less-than-significant level.

IMPACT 4.10.7	PROJECT CONSTRUCTION NOISE AT PROPOSED NOISE SENSITIVE RECEPTORS
Significance Before Mitigation	Potentially Significant
Mitigation Measures	Modified Project Mitigation: MM 4.10-1
Significance After Mitigation	Less Than Significant
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

The Modified Project is proposed to be constructed continuously over several years with the possibility of some planning areas being completed while other areas are constructed. In this circumstance, Modified Project construction could increase ambient noise levels above allowable limits at sensitive receptors already living in the Modified Project Site. Activities such as grading excavation, paving, and building could generate noise levels between 55 and 90 dB at 50 feet.

Implementation of **Mitigation Measure 4.10-1** would ensure that such activities do not create nuisance noise.

4.10.5.7 Cumulative Impacts

IMPACT 4.10.8	CUMULATIVE NOISE IMPACTS
Significance Before Mitigation	Less Than Significant
Mitigation Measures	None Required
Significance After Mitigation	None Applicable
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

Cumulative Traffic Noise

Cumulative versus Cumulative Plus Project traffic noise levels on the local roadway network are shown in Table 11 of **Appendix T**. The following section includes an assessment of predicted traffic noise levels relative to the FICON increase significance noise criteria identified in **Table 4.10-12**.

The data in Table 11 of **Appendix T** indicate that the contribution from the Modified Project to traffic noise level increases is predicted to exceed the FICON substantial increase criteria along the following roadway segments evaluated in the cumulative conditions analysis.

- East of Chevron® and Stenmark Drive
- West of Chevron® and Stenmark Drive

The roadway segments east and west of the Chevron® and Stenmark Drive intersection are predicted to have cumulative plus project traffic noise levels of approximately 61 and 60 dB L_{dn} at a distance of 100 feet from the roadway centerline, respectively. However, additional analysis of those roadway segments revealed that they are located within industrial areas – for which the General Plan and RMC establish a normally acceptable noise level standard of 75 dB L_{dn}. Further, no residences or other sensitive land uses were identified along those roadway segments.

Because the predicted cumulative plus project noise levels are well within compliance of the applicable General Plan and RMC noise level limits along the roadways containing substantial noise level increases,

and because there are no identified sensitive receptors along those roadway segments, off-site traffic noise impacts related to increases in traffic resulting from implementation of the Modified Project are identified as being less than significant.

Cumulative Operations

In the year 2040, the Modified Project would have the potential to result in on-site operational noise from use of fans for HVAC, truck loading and unloading, refuse collection, and wastewater treatment plant operation. The Project Site is surrounded by water, open space hillsides, and industrial development, with no nearby undeveloped areas. There are no reasonably foreseeable projects that could occur near the project such that cumulative noise would combine to exceed the City's noise standards. Further, as discussed above, the nearest identified existing noise-sensitive receptor is located approximately 3,800 feet from the nearest proposed commercial/residential uses within the Project Site. As a result, this impact would be less than significant.

Cumulative Vibration

The Modified Project's vibrations from the construction of the Modified Project would combine with the vibrations of other nearby construction projects occurring at the same time. As noted above, other than the Bay Trail project, there are no foreseeable future projects that could occur at the same time and close enough to the Modified Project for vibrations to add together. Therefore, there is no cumulative impact related to groundborne vibrations from construction noise. Modified Project's operations would not create noise that could generate groundborne vibrations and there is no existing significant cumulative impact related to groundborne vibrations for which the Modified Project could contribute.

4.10.6 MITIGATION MEASURES

This section includes mitigation measures that reduce environmental impacts of the Modified Project. Mitigation measures that were identified in the 2011 FEIR have been presented in this SEIR as appropriate; however, review of the mitigation measures identified in the 2011 FEIR determined that some measures required revisions or were not applicable to the Modified Project; however, new and more relevant mitigation measures are identified below. **Appendix K** provides a summary of whether each mitigation measure from the 2011 FEIR was revised, deleted, or kept as is and the reasoning for that determination.

Mitigation Measure 4.10-1: In order to satisfy applicable City noise level limits at existing sensitive receptors, the following construction-related noise mitigation measures shall be implemented.

- All mobile or fixed noise-producing equipment used that are regulated for noise output by a federal, state, or local agency shall comply with such regulations while in the course of project activity.
- Electrically powered equipment shall be used instead of pneumatic or internal combustion-powered equipment, where feasible.
- Material stockpiles and mobile equipment staging, parking, and maintenance areas shall be located as far as practicable from noise-sensitive receptors.
- Project work area speed limits shall not exceed 15 mph during the construction period.

- Nearby sensitive receptors shall be notified of construction schedules so that arrangements can be made, if desired, to limit their exposure to short-term increases in ambient noise levels.
- Any engine-powered construction equipment located adjacent to residential uses for more than five days shall be shielded from those uses by temporary noise-reducing barriers.
- Comply with City ordinance requirements, including:
 - Use of pile drivers, sources of impulsive sound and jack hammers shall be prohibited on Sundays and holidays, except for emergencies or as approved in advance by the Building Official. General construction noise shall be limited to weekdays from 7:00 a.m. to 6:00 p.m. Pile driving and similar loud activities shall be limited to weekdays from 8:00 a.m. to 5:00 p.m. General construction noise on projects repairing, renovating, or adding to residential structures with one to five dwelling units shall be limited to the hours of 7:00 a.m. to 8:00 p.m. Monday through Friday and 9:00 a.m. to 6:00 p.m. on Saturdays, Sundays, and federal holidays. Pre-construction activities, including loading and unloading, cleaning of mechanical toilets, deliveries, truck idling, backup beeps, yelling, and radios also are limited to these construction noise hours.
 - No construction shall be permitted outside of these hours that creates construction noise, except in emergencies, including maintenance work on the City rights-of-way that might be required.
 - All construction equipment powered by internal combustion engines shall be properly muffled and maintained.
 - Unnecessary idling of internal combustion engines is prohibited.
 - All stationary noise-generating construction equipment such as tree grinders and air compressors are to be located as far as is practical from existing residences.
 - Quiet construction equipment, particularly air compressors, are to be selected whenever possible.

Mitigation Measure 4.10-2: In order to reduce potential vibration impacts to historic resources, the following construction-related vibration mitigation measures shall be implemented.

- Prior to the start of any ground-disturbing activity, the Project proponent shall engage a historic architect or qualified historic preservation professional to undertake a pre-construction survey of historical resource(s) within the Historic District to document and photograph the buildings' existing conditions.
- Prior to the start of construction, a structural engineer or other qualified entity shall establish a maximum vibration level that shall not be exceeded at each building, based on existing conditions, character-defining features, soils conditions, and anticipated construction practices in use at the time.
- To ensure that vibration levels do not exceed the established standard, a qualified acoustical/vibration consultant shall monitor vibration levels at each structure within the Historic District using proper monitoring equipment and shall prohibit vibratory construction activities that generate vibration levels in excess of the standard. Should vibration levels be observed in excess of the standard, construction shall be halted and alternative construction techniques put in practice.
- The qualified acoustical/vibration consultant shall conduct regular periodic inspections of each building within the Historic District. Should damage to a building occur as a result of

ground-disturbing activity on the Project Site, the building(s) shall be remediated to its pre-construction condition at the conclusion of ground-disturbing activity on the Project Site.

Mitigation Measure 4.10-3: Along with the plans submitted for building and/or grading permits for development of a single-family home or townhome along Stenmark Drive, a building-specific noise impact study shall be submitted for City review to determine if exterior noise at the building's property line would exceed 65 dBA. If so, then the building would be required to incorporate measures, such as use of sound rated door and window assemblies, mechanical ventilation, careful siting or use of landscaping for outdoor recreation areas, or other methods to reduce interior noise levels to 45 dBA CNEL and provide noise shielding.

Mitigation Measure 4.10-4: Along with the plans submitted for building and/or grading permits for development of commercial and multi-family residential uses, a building-specific noise impact study shall be submitted for City review to demonstrate that interior noise levels for nearby current and proposed sensitive receptors have been reduced to 45 dBA CNEL. The following mitigation measures can be implemented for commercial and multi-family residential uses to reduce noise exposure to the desired level:

- Ensure that noise exposure associated with the selected mechanical equipment satisfies the applicable City noise level limits at proposed sensitive receptors.
- Screen rooftop mechanical equipment to attenuate noise exposure.
- Locate mechanical equipment on the rooftop of commercial buildings away from sensitive receptors.
- Refuse dumpsters and commercial loading and unloading areas shall be located as far as reasonably possible from the outdoor activity areas of proposed residential buildings. Commercial refuse containers shall also be located such that buildings shield nearby residential uses from noise generated by loading/unloading operations and garbage collection activities.
- Use of sound rated door and window assemblies for multi-family residential buildings, if required.

Mitigation Measure 4.10-5: If the Modified Project includes the installation of an on-site sanitary sewer treatment facility, once the installment of this facility has been confirmed, and building plans are filed, prepare a site-specific noise impact study analyzing the facility operational equipment noise level to be conducted and noise generated by this facility. If the noise study determines that noise levels from operation of the on-site sanitary sewer treatment facility exceed acceptable levels for sensitive receptors established by the City, the following mitigation measures shall be implemented.

- Ensure that noise exposure associated with the selected facility equipment satisfies the applicable City noise level limits at proposed sensitive receptors.
- Construct solid noise barriers around the perimeter of the facility equipment area that effectively attenuate equipment noise exposure to a state of compliance with the applicable City noise limits at proposed sensitive receptors.

4.11 POPULATION AND HOUSING

4.11.1 INTRODUCTION

This section provides a description of population and housing conditions in the area of the Point Molate Mixed-Use Development Project (Modified Project), and describes the changes to those conditions that would result from implementation of the Modified Project. Following an overview of the relevant regulatory setting in **Section 4.11.2** and the environmental setting in **Section 4.11.3**, project-related impacts and mitigation measures are presented in **Section 4.11.5** and **Section 4.11.6**, respectively. The population and housing impacts associated with the Casino Project and analyzed as Alternative A in the *Final Environmental Impact Report for the Point Molate Mixed-Use Tribal Destination Resort and Casino Project* (2011 FEIR) are summarized in **Section 4.11.4** and compared to the impacts of the Modified Project.

4.11.2 ENVIRONMENTAL SETTING

Information provided in this section is derived from a number of sources including the City's General Plan, General Plan Housing Element, ABAG, U.S. Census, and California Department of Finance. This analysis focuses on the manner in which development could alter the Project Site under baseline conditions, which are defined for the purposes of the analysis in this section as physical and demographic conditions on or around the publication of the Notice of Preparation (NOP) in July 2019.

4.11.2.1 Population

The Project Site is located on the San Pablo Peninsula 1.5 miles north of the eastern side of the Richmond-San Rafael Bridge and Interstate 580. The western portion of the City is dominated by industrial uses but the residential and commercial centers of the City are located nearby, including a neighborhood, Point Richmond, located approximately 1.2 miles southeast of the Project Site.

Table 4.11-1 shows population statistics for the City, Contra Costa County (County), and the State of California, while **Table 4.11-2** shows the unemployment rates for those respective geographies. Additionally, the Federal Reserve Board estimates that the normal rate of unemployment for the United States is approximately 3.6 percent (Federal Reserve Board, 2019). The City had a 2017 population of 108,853, approximately 10 percent of the population of the County. The Housing Element of the General Plan projected the City's population will increase by approximately 28,899 residents between 2010 and 2030 for a total population of 132,600 in 2030. The Housing Element's population projections are based on the ABAG's Projections 2009: Building Momentum projections, however, the ABAG has released the more up to date Plan Bay Area 2040 projections. The Plan Bay Area 2040 projected the City's population will increase by approximately 44,780 residents between 2015 and 2040 for a total population of 164,220 in 2040 (ABAG, 2017b).

TABLE 4.11-1
REGIONAL POPULATION

Location	2009 ¹	2017 ²
City of Richmond	104,513	108,853
Contra Costa County	1,060,435	1,112,145
State of California	38,292,687	38,521,701
Note: 2017 population numbers were the most recent data available at the drafting of this SEIR. The 2009 population numbers are provided to show a comparison with what was used in the 2011 FEIR.		
Sources: ¹ State of California, Department of Finance, 2012a; ² U.S. Census Bureau, 2017b.		

TABLE 4.11-2
REGIONAL UNEMPLOYMENT

Location	Unemployment rate (percent)
City of Richmond	8.7
Contra Costa County	6.9
State of California	7.7
Source: U.S. Census Bureau, 2017c.	

4.11.2.2 Housing

The Modified Project would be a redevelopment and infill project. Residential uses are currently located throughout the City. Most of the residential development is located in the central area, with lower residential densities located primarily east of Interstate 80. Many areas have mixed residential, commercial, and industrial uses. **Table 4.11-3** shows a comparison of 2009 and 2017 housing units and vacancy statistics for the City, County, and the State of California. In 2017, the City had 39,534 total units, of which 7.1 percent were vacant, in comparison to the County and the State, which had vacancy rates of 4.7 and 8.0 percent, respectively. Over the 8-year period, the total units in the County increased at a rate of 0.31 percent per year, which was slightly less than the average growth of the State over the same period. Over this period, the vacancy rate in the County increased at a rate of 0.2 percent per year, vacancy rates slightly increased at a rate of 0.3 percent for the State; and the vacancy rate of the City increased at a rate of 0.4 percent per year, a rate slightly greater than the average growth of the State and County. Additionally, it is projected that the City's housing will increase by approximately 14,635 households between 2015 and 2040, which would be a 26.6 percent increase in the number of households (ABAG, 2017c). The high rate of increase in households could be due to an increase in multi-family developments rather than single family homes. **Table 4.11-4** presents the amount of vacant rentals for the respective price brackets. The City's price brackets with the most vacant units are \$1,000 to \$1,249, \$1,250 to \$1,499, and \$1,500 to \$1,999, while the County's most vacant units are concentrated in the \$1,250 to \$1,499, \$1,500 to \$1,999, and \$2,000 to \$2,499 ranges.

TABLE 4.11-3
REGIONAL HOUSING STOCK

Location	2009 ¹		2017 ²		Trend (percent Change per year)	
	Total Units	Vacant (percent)	Total Units	Vacant (percent)	Total Units	Vacant
City of Richmond	38,433	3.9	39,534	7.1	+0.35	+0.4
Contra Costa County	399,187	3.0	409,117	4.7	+0.31	+0.2
State of California	13,530,719	5.9	13,996,299	8.0	+0.43	+0.3
Source: ¹ State of California, Department of Finance, 2012b; ² U.S. Census Bureau, 2017b.						

TABLE 4.11-4
2017 REGIONAL VACANT RENTAL PRICES

Location	Vacant Rental Units per Price Bracket						
	\$750 to \$799	\$800 to \$899	\$900 to \$999	\$1,000 to \$1,249	\$1,250 to \$1,499	\$1,500 to \$1,999	\$2,000 to \$2,499
City of Richmond	25	41	0	135	133	159	13
Contra Costa County	25	133	258	504	605	1,572	844
Notes: This table presents a range of the price brackets with the highest amount of units. Other lower and higher price brackets may have units as well. Source: U.S. Census Bureau, 2017d.							

4.11.3 REGULATORY SETTING

4.11.3.1 Regional Housing Needs Allocation

Cities and counties are required by California law to account for regional housing needs in the housing elements of their general plans. The purpose of the Regional Housing Needs Allocation (RHNA) is to allocate and preemptively plan for housing for all income ranges for an eight-year period. The California Department of Housing determines the total housing necessary for the San Francisco Bay Area (Bay Area) region and then the Association of Bay Area Governments (ABAG) distributes this need to local governments through the Final Regional Housing Need Plan (RHNP), which outlines the RHNA. The ABAG adopted the Final RHNP for the period of 2015 to 2023 in 2013.

The Housing Element for the City of Richmond (City; adopted in 2015) addresses the fair share allocation of the City for regional housing, as projected by ABAG and presented in the RHNA. According to the RHNA, for the 2015-2023 period, the City is responsible for 2,435 new housing units, out of 187,990 units needed for the Bay Area over this eight-year period (ABAG, 2013).

The Point Molate Site (Project Site) is not located on the City Housing Element's Vacant Land Inventory. It is designated Low-Density Residential, Medium-Density Residential, Business/Light Industrial, Open Space, and Parks and Recreation under the City's General Plan 2030 (General Plan) and zoned for two different residential designations (Single-Family Hillside Residential [RH] and Multi-Family Residential [RM1]), as well as General Commercial, Light Industrial, Open Space, and Parks and Recreation as per the City Zoning Map. According to the Land Use Element of the General Plan, the area designated Medium-Density Residential could have a density of 40 dwelling units per acre and the area designated

Low-Density Residential could have a density of up to 15 dwelling units per acre (City of Richmond, 2012). Based upon the current General Plan land use designations, the Project Site could be developed with approximately 810 units. The General Plan Land Use Element identifies Change Areas, which are underutilized areas that require a development strategy to achieve the respective urban design form of that area. The Project Site is located in the Point Molate Naval Fuel Depot area within the San Pablo Peninsula Area Change Area District as shown in **Figure 4.9-2**. More detail on how the General Plan treats the Project Site beyond potential housing unit production is presented in the discussion in **Section 4.9.2** of the Land Use and Planning Section of this Draft Supplemental Environmental Impact Report.

4.11.3.2 City of Richmond General Plan

The Housing Element of the General Plan provides detailed information related to the City's housing needs and standards. The Housing Element estimates that the average household size in the City is 2.83 persons. The Housing Element projects that the population of the City will increase by approximately 28,899 between 2010 and 2030, from 103,701 in 2010 to 132,600 in 2030, a 1.2 percent annual growth rate. The Economic Development Element and the Housing Element of the General Plan contain goals and policies that are relevant to population and housing. Applicable goals and policies are cited below.

GOAL ED1 **An Appealing Place to Live and Work.** Foster neighborhoods, commercial and industrial areas, and public spaces that are safe and welcoming environments to live, work, and visit. Effective public safety services, neighborhood revitalization efforts, opportunities for cultural and recreational activities, affordable housing, socially and environmentally responsible businesses, and a diverse and expanded tax base will contribute to this environment.

Policy ED1.3 **Toxic and Contaminated Sites.** Continue to work with the appropriate local, state, and federal agencies to promote the cleanup and reuse of contaminated sites to protect human and environmental health. Work with property owners and regional agencies to prevent, reduce, or eliminate soil and water contamination from industrial operations, the Port, and other activities that use, produce, or dispose of hazardous or toxic substances. Implement appropriate mitigation measures and cleanup of sites that are known to contain toxic materials as a condition of reuse. Support the remediation and reuse of large, disturbed sites, such as the Winehaven complex at Point Molate and the Terminal 4 site at Point San Pablo, into mixed-use centers that provide the maximum benefit to the community without compromising the integrity of the surrounding natural areas.

Policy ED1.5 **A Range of Housing Types.** Continue to require developers to provide a range of housing types and residential densities to meet the needs of all age groups, income levels, and household sizes. In the Bay Area's high-priced housing market, employers often look to relatively affordable housing as factors in location decisions. The local housing stock should continue to include condominiums, single-family homes, apartments, townhouses, lofts, and other products to provide a range of options.

GOAL ED9	A Regional Recreational Destination on the San Pablo Peninsula. Transform the San Pablo Peninsula into a major regional open space, parks, and recreation resource, offering public access to the shoreline, regional entertainment, retail, lodging, and dining opportunities. Contribute to this mix by encouraging residential development which takes advantage of the spectacular [San Francisco Bay] Bay views from the area.
Policy ED9.1	A Mix of Land Uses. Promote a mix of uses to create a complete community in the San Pablo Peninsula area. Develop lodging and visitor-serving concessions (such as cafes, and bike and kayak rental kiosks) to elevate the San Pablo Peninsula as a local and regional destination and complement its potential development as a resort and entertainment center. Residential uses should also be explored for the area to add to its 24-hour vitality and to capitalize on Bay views.
GOAL H1	A Balanced Supply of Housing. Promote a balanced supply of housing types, densities, and prices to meet the needs of all income groups.
Policy H1.3	Supply of Affordable Housing. Promote the development of homes that are affordable to extremely low, very low, low, and moderate-income households in all new residential developments as well as in existing single-family neighborhoods.
Policy H1.4	Variety of Housing Choices. Promote a variety of housing types that meet the different lifestyle and life cycle needs of residents including young adults, young couples, and single professionals, small and large families, empty-nesters, and older couples.
GOAL H2	Better Neighborhoods and Quality of Life. Improve the quality of life for all residents and preserve and enhance residential neighborhoods in the City; specifically promote high quality living environments, address substandard conditions, preserve and modernize public housing, and conserve affordable housing at risk of converting to market rates.
Policy H2.1	High-Quality Living Environments. Promote high-quality living environments by requiring exceptional architectural, urban, landscape, and green building design and by focusing residential development in areas that are within walking and biking distance of jobs, shopping, schools, recreation, entertainment, public transportation, and other community amenities.
Policy H2.6	Toxic and Contaminated Sites. Continue to work with the appropriate local, state, and federal agencies to promote the cleanup and reuse of contaminated sites to protect human health and the environment.
GOAL HW7	Complete Neighborhoods. Promote complete neighborhoods that provide access to a range of daily goods and services, and recreational resources within comfortable walking distance of homes. Neighborhood-serving retail, parks, pedestrian

connections, and other amenities can contribute to neighborhood stability, greater social cohesion, and improved safety.

Policy HW7.1 ***Higher-Density and Mixed-Use Infill Development.*** Provide higher-density and infill mixed-use development affordable to all incomes on vacant and underutilized parcels throughout the City. Ensure efficient use of land and existing circulation infrastructure by:

- promoting higher-density, transit-oriented, and pedestrian-friendly development along key commercial corridors, at key intersections (community nodes and gateways); and
- supporting local-serving commercial activities in residential areas to provide needed services and amenities close to where people live and work.

Policy HW7.2 ***Neighborhood-Serving Retail.*** Promote local-serving retail and public amenities at key locations within residential neighborhoods. Support development of small-scale neighborhood nodes that provide a range of neighborhood-serving retail, public amenities and services to residents within walking distance of their homes. Revitalizing Richmond's neighborhoods can reduce dependence on cars, improve access to daily goods and services, promote small business development, increase opportunities for social interaction, and reduce crime by increasing street use and natural surveillance.

Local Employment Ordinance

The City's Local Employment Ordinance requires development projects that receive a specified City subsidy and City Public Works or Service Contracts with a specified value to hire a certain percentage of local residents. In addition, businesses with more than 10 employees that occupy a portion of a City project site for a specified number of years must hire a minimum percentage of local residents.

City of Richmond Zoning Ordinance

Inclusionary Housing Ordinance, Zoning Ordinance § 15.04.810.060, sets forth requirements for the inclusion of affordable housing in all new housing developments of 10 or more units. The Modified Project would be subject to the inclusionary housing provisions included in the Amended Final Settlement Judgment between the City and Upstream and the Guidiville Tribe, dated November 21, 2019, and with RMC section 15.04.810.063 provisions. The requirements of the Inclusionary Housing Ordinance are as follows.

- Making 17 percent or more of housing units available to moderate-income households; or
- Making 15 percent or more of housing units available to low-income households; or
- Making 10 percent or more of housing units available to very low-income households; or
- Making 12.5 percent or more of housing units available to a combination of very low and low income households; or
- Making 25 percent or more of housing units available to very low or low-income senior households; or
- Paying the in-lieu fee towards the very low and low-income affordable housing fund of the City.

4.11.3.3 Point Molate Reuse Plan

The *1997 Point Molate Reuse Plan* (Reuse Plan) presents development goals and objectives that focus on balancing economic development with community needs (City of Richmond, 1997). The Reuse Plan identifies five distinct land use areas: the Core Historic District; the Northern Development Area; the Central Development Area; the Southern Development Area; and the Shoreline Park and Hillside Open Space Areas that are presented in **Figure 4.9-3**. As described in **Table 4.9-1**, the Northern Development Area, the Central Development Area, and the Southern Development Area were proposed to be used for residential development, with approximately 670 units.

4.11.3.4 San Francisco Bay Plan

The Bay Conservation and Development Commission (BCDC) is the agency responsible for maintaining and carrying out the provisions of the San Francisco Bay Plan (Bay Plan). The Bay Plan contains information that describes the values associated with the Bay and policies regarding future uses of the Bay and shoreline, including recreational uses. The following policies in the Bay Plan are relevant for the Modified Project.

Part IV: Environmental Justice and Social Equity

1. Equitable, culturally relevant community outreach and engagement should be conducted by local governments and project applicants to meaningfully involve potentially impacted communities for major projects and appropriate minor projects in underrepresented and/or identified vulnerable and/or disadvantaged communities, and such outreach and engagement should continue throughout the Commission [BCDC] review and permitting processes. Evidence of how community concerns were addressed should be provided. If such previous outreach and engagement did not occur, further outreach and engagement should be conducted prior to Commission [BCDC] action.
2. If a project is proposed within an underrepresented and/or identified vulnerable and/or disadvantaged community, potential disproportionate impacts should be identified in collaboration with the potentially impacted communities. Local governments and the Commission [BCDC] should take measures through environmental review and permitting processes, within the scope of their respective authorities, to require mitigation for disproportionate adverse project impacts on the identified vulnerable or disadvantaged communities in which the project is proposed.

4.11.4 2011 FEIR ANALYSIS

This section provides a summary of the impacts to population and housing conditions analyzed for the Casino Project in the 2011 FEIR followed by a description of changes since the 2011 FEIR that relate to population and housing.

4.11.4.1 2011 FEIR Summary of Impacts

Impacts

The 2011 FEIR found that the increased demand for housing under the Casino Project due to the relocation of employees would have generated demand for vacant current housing. The Casino Project

would have included a total of 1,138 employment opportunities with 569 expected to relocate; this would have subsequently generated demand for vacant housing within the County. However, the County's 19,934 projected vacant units for 2012 could have satisfied this demand. Therefore, the 2011 FEIR determined that the Casino Project would have had a beneficial impact on the City and County housing market.

Cumulative Impacts

The 2011 FEIR found that the development of the Casino Project would have resulted in the creation of employment opportunities and therefore a growth in City population. The Casino Project in combination with the other development projects occurring within the geographic scope of this cumulative assessment would result in the construction of residential communities, and this would cause further population growth. Furthermore, cumulative economic influences on the region would likely result in further development in the City, and planning documents for the City and the County would continue to designate land uses for businesses, industry, and housing. The 2011 FEIR found this increased demand for vacant housing to be a beneficial impact.

4.11.4.2 Changes Since the 2011 FEIR

The 2011 FEIR projected that, in 2012, the County would contain approximately 421,152 housing units which is similar to approximate 400,098 housing units actually within the County in 2012 (U.S. Census Bureau, 2017e). Additionally, the 2011 FEIR projected that the 2012 County vacant housing would be approximately 19,934 units which is similar to the 19,228 units of vacant housing in 2017 (U.S. Census Bureau, 2017b).

Since the 2011 FEIR, Appendix G of the California Environmental Quality Act (CEQA) Guidelines was updated in 2018. The number of significance thresholds for population and housing have been reduced from three to two, but the content has remained primarily the same because two of the former significance thresholds were combined. Therefore, the content has changed little.

The City adopted a new General Plan in 2012. Although the new General Plan was reorganized and rewritten, the content pertaining to housing and population essentially remained the same. However, new content pertaining to "An Appealing Place to Live and Work" has been included in the new General Plan. Furthermore, new policies pertaining to remediating hazardous waste for the purpose of reuse, such as public access and recreation, has also been added.

4.11.5 IMPACTS

4.11.5.1 Thresholds of Significance

Criteria for determining the significance of impacts on population and housing have been developed based on Appendix G of the CEQA Guidelines and relevant agency thresholds. Impacts associated with population and housing would be considered significant if the Modified Project would:

- induce substantial unplanned population growth in the area, directly or indirectly, or
- displace substantial numbers of existing housing or people, necessitating the construction of replacement housing elsewhere.

4.11.5.2 Method of Analysis

Information provided in this section is derived from a number of sources including the City's General Plan, General Plan Housing Element, ABAG, U.S. Census, and the California Department of Finance. This analysis focuses on the manner in which development could alter the Project Site under baseline conditions, which are defined for the purposes of the analysis in this section as physical and social conditions in the vicinity of the study area on or around the publication of the NOP in July 2019.

This section identifies any impacts to population and housing that could occur from construction and operation of the Modified Project. Impacts to population and housing were analyzed based on an examination of the Modified Project as well as the City and County population and housing demographics through the use of published sources of housing and population demographic data and projections such as the U.S. Census Bureau, the General Plan, and the ABAG. The General Plan and RHNP were reviewed to evaluate the housing deemed necessary by the City, County, and ABAG. This analysis focuses on the manner in which development could alter the populations and housing markets of the City and County. This analysis compares how the estimated increased growth compares to the growth projected in the General Plan and in ABAG projections which will demonstrate the extent to which growth from the Modified Project was anticipated and/or would accommodate already forecasted growth. The analysis also evaluates if indirect growth such as new or extended infrastructure proposed as part of the Modified Project was already anticipated or would generate unplanned growth. This analysis is based upon both Option 1 (Residential-Heavy Option) and Option 2 (Commercial-Heavy Option), as presented in **Table 4.11-5**. As presented in **Table 4.11-5**, the population generated by the Commercial-Heavy and Residential-Heavy options was calculated using the General Plan's Housing Element's household size as well as the respective estimated amount of residential units.

TABLE 4.11-5
POPULATION ESTIMATES BASED ON CITY OF RICHMOND HOUSING ELEMENT

Residential Units – Commercial-Heavy Development	Residential Units – Residential-Heavy Development	Household Size	Population Generated – Commercial-Heavy Development	Population Generated – Residential-Heavy Development
1,260	2,040	2.83	3,536	5,773

Source: City of Richmond, 2015b.

4.11.5.3 Effects Found Not to be Significant Without Further Analysis

Review and comparison of the existing setting conditions and the Modified Project characteristics with the significance criteria clearly show that no impacts would be associated with the following criteria for the reasons stated below for each.

- There is currently no housing or people on the Project Site that could be displaced by the Modified Project. No replacement housing would be necessary due to the lack of people and housing currently onsite and therefore, the Modified Project would not displace substantial numbers of people or housing, necessitating the construction of replacement housing elsewhere. Thus, there would be no significant impact under this criterion.

The Bay Trail would not induce substantial unplanned population growth in an area, either directly or indirectly.

The Bay Trail extension is a separate project that the Modified Project would construct. As stated in the IS/MND for the Bay Trail extension, the addition of a non-motorized bike and pedestrian trail along the coast for recreational purposes would not induce population growth directly or indirectly as no new housing, commercial buildings, or new infrastructure would occur as a result of the Bay Trail. Therefore, the Bay Trail is not anticipated to induce substantial population growth either directly or indirectly.

4.11.5.4 Project-Level Impacts

IMPACT 4.11.1	INDUCE SUBSTANTIAL UNPLANNED POPULATION GROWTH IN AN AREA, EITHER DIRECTLY (FOR EXAMPLE, BY PROPOSING NEW HOMES AND BUSINESSES) OR INDIRECTLY (FOR EXAMPLE, THROUGH THE EXTENSION OF ROADS OR OTHER INFRASTRUCTURE)?
Significance Before Mitigation	Less Than Significant
Mitigation Measures	None Required
Significance After Mitigation	Not Applicable
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

Direct

Construction

Construction of the Modified Project would require a significant construction workforce. Construction workers who live outside the County could temporarily reside within the County or City. It can be reasonably expected that some of these construction workers may permanently relocate; however, in 2017, the County had approximately 19,228 vacant housing units and the City had approximately 2,806 vacant housing units (U.S. Census Bureau, 2017b). As shown in **Table 4.11-4**, the County and City would have housing units with a range of prices from \$750 to \$2,499 for the relocating construction workers (U.S. Census Bureau, 2017d). Therefore, additional housing would not be needed. For these reasons, there would be no impact related to population from the construction of the Modified Project.

Operation

As seen in **Table 4.11-6**, the residential-heavy Modified Project would include the construction of up to approximately 2,040 residential units, which, based on the average household size of the City, would generate approximately 5,773 new residents. Although the creation and operation of residential, commercial, and retail and restaurants could lead to future population growth, it would not be unplanned growth. The following documents plan for the development of Point Molate: Reuse Plan, General Plan, and the City of Richmond Zoning Ordinance.

The commercial and retail developments of the Modified Project would employ people which could lead to an increase in population. However, the City's high rate of unemployment compared to the nation, State, and County, suggests that a substantial number of jobs could be accommodated by the local labor pool.

Furthermore, the City has a Local Employment Ordinance which would require the Modified Project to hire a portion of local residents. Additionally, due to the mixed-use nature of the Modified Project and the location, it is likely that a portion of the employees would live in either the development or the City. The employees generated by the Modified Project would be unlikely to relocate and would therefore not increase the population in the region.

The Reuse Plan planned for approximately 670 residential units, transportation improvements, and utility infrastructure including water supply, a stormwater system, a sanitary sewer system, electricity, natural gas, and telephone and telecommunications systems. As described in **Section 4.9.2**, the General Plan land use designation for the Project Site includes low-density residential and medium-density residential. According to land use designations, the Modified Project could develop approximately 810 units which would result in an estimated population growth of approximately 2,292 persons. Additionally, as described in **Section 4.11.2**, a range of General Plan goals and policies seek to promote the development of residential areas. For example, General Plan Goal ED9 seeks the development of the San Pablo Peninsula as a regional recreational destination and specifically encourages residential development. As described in **Section 4.9.2**, the zoning designations for the Project Site include RH and RM1. According to those zoning designations, the Modified Project could develop approximately 410 residential units that would result in an estimated population growth of approximately 1,160 persons.

TABLE 4.11-6
RESIDENTIAL UNITS AND POPULATION

	Residential Units	Population
Current Zoning	410	1,160
Commercial-Heavy Option	1,260	3,536
Residential-Heavy Option	2,040	5,773
Sources: City of Richmond, 2015b		

Through the Reuse Plan, the General Plan, and zoning, the City has extensively and consistently planned for development and growth at Point Molate and on the San Pablo Peninsula. Furthermore, as described in **Section 4.11.2**, the RHNP requires the City to produce a total of 2,435 housing units, with 743 units allocated for very low to low income families, by 2023 for the Bay Area to reach its regional housing need allocation. Both the Commercial-Heavy Option and Residential-Heavy Option would result in housing that would help the City meet its RHNA obligation and would aid the Bay Area in reaching its overall RHNA.

In 2017, the City had a total population of approximately 108,853 people and was projected to have a population increase of approximately 44,780 people between the years 2015 and 2040. As presented in **Table 4.11-7**, the Modified Project would generate between 3,536 and 5,773 people which would increase the population of the City by approximately 3.2 and 5.3 percent, respectively. The Modified Project's generated population would constitute approximately 7.9 and 12.9 percent, respectively, of the projected population growth between the years 2015 and 2040. Furthermore, in 2016 the City had approximately 2,806 vacant units, which would not be adequate to accommodate the projected population growth that would occur between 2015 and 2040. Due to the 2011 FEIR and the Casino Project not including any development of residential units, the Modified Project would have up to a 2,040 residential

unit increase compared to the Casino Project. Due to the City containing only 2,806 vacant units, substantial residential development would be required to accommodate the projected population growth. The density of residential development in the Modified Project would be greater than the surrounding area, however, the incremental increase in the number of residential units and population by the Modified Project compared to the units and population that could be accommodated under the existing land use designation would not be substantial in light of the overall population of the City and would aid the City in accommodating its future population growth. Therefore, the Modified Project would not directly induce substantial new population growth in the City, and the impact would be less than significant; no mitigation would be required.

TABLE 4.11-7
POPULATION GENERATED

	Commercial Heavy	Residential Heavy
Population Generated	3,536	5,773
Increase in City's 2017 Population	3.2 percent	5.3 percent
Portion of City's 2015-2040 Population Growth	7.9 percent	12.9 percent
Sources: U.S. Census Bureau, 2017a; ABAG, 2017b.		

On-Site and Off-Site Infrastructure

The Modified Project would include the development of on-site and off-site infrastructure such as road extensions and utilities that could potentially indirectly lead to future growth. However, the infrastructure would be developed and sized so as to serve the new development, and not to accommodate future, unplanned growth. Furthermore, the surrounding area is dominated by land designated for industrial or open space, or is steep hillsides not suitable for development. Therefore, it is unlikely that the development of the on-site and off-site infrastructure would increase growth in the area due to the infill nature of the Modified Project as well as the land use and physical constraints of the surrounding areas. Moreover, infrastructure, including roads and utilities, already exists on the Project Site and in the vicinity indicating that development of infrastructure is not restricting development of the surrounding area. Therefore, the Modified Project would not result in indirect population growth as a result of the extension of utilities or road improvement infrastructure to the Project Site. This impact would be less than significant and therefore no mitigation would be required.

4.11.5.5 Cumulative Impacts

IMPACT 4.11.2	CUMULATIVE POPULATION AND HOUSING IMPACTS
Significance Before Mitigation	Less Than Significant
Mitigation Measures	None Required
Significance After Mitigation	Not Applicable
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

The Modified Project along with the cumulative projects, as presented in **Table 5-1 of Section 5.0**, would increase the amount of residential, commercial, and retail and restaurant development as well as

infrastructure such as roads and utilities in the region. The Modified Project's cumulative impacts are considered within the context of the City, the County, and the Bay. The General Plan Update Environmental Impact Report, incorporated by reference in **Section 1.4.4**, is based upon the assumption that infill and redevelopment growth, and subsequent population growth, will occur within the City. Additionally, the General Plan EIR identifies the necessity of building high-density developments within the City.

The determination of whether or not the Modified Project would directly or indirectly induce substantial population growth is inherently a cumulative consideration because the Modified Project's growth is analyzed relative to past, present, and future population and housing plans and trends. Furthermore, the analysis within this section is based upon projections which consider cumulative growth through 2040 within the geographic context as described above. Furthermore, within the analysis of the General Plan EIR, no cumulative impact in relation to population and housing was identified.

Therefore, the Modified Project's less-than-significant population and housing impact, combined with past, present, and other foreseeable development in the area as presented in **Table 5-1** in **Section 5.0**, would not result in a cumulative impact.

4.11.6 MITIGATION MEASURES

Review of the mitigation measures identified in the 2011 FEIR determined that some measures required revisions or were not applicable to the Modified Project. It was determined that several of the mitigation measures identified in Section 5.2.8 of the 2011 FEIR are no longer applicable in regards to population and housing for the Modified Project. **Appendix K** provides the reasoning for why each mitigation measure from the 2011 FEIR was deleted.

4.12 PUBLIC SERVICES AND RECREATION

4.12.1 INTRODUCTION

This section provides a description of public services, including fire protection and emergency services, police protection services, public schools, and parks, in the Point Molate Mixed-Use Development Project (Modified Project) area and describes the changes to those conditions that would result from implementation of the Modified Project. In addition, although listed as a separate section in Appendix G of the California Environmental Quality Act (CEQA) Guidelines, recreation facilities are also addressed in this section because parks and recreation are closely related. Following an overview of the relevant regulatory setting in **Section 4.12.2** and a description of the existing setting in **Section 4.12.3**, Modified Project-related impacts and mitigation measures are presented in **Section 4.12.5** and **Section 4.12.6**, respectively. The impacts to public services and recreation identified under the Casino Project in the *Final Environmental Impact Report for the Point Molate Mixed-Use Tribal Destination Resort and Casino Project* (2011 FEIR) are also summarized in **Section 4.12.4** and are compared to the impacts of the Modified Project.

4.12.2 REGULATORY SETTING

4.12.2.1 Federal

Education is mostly regulated on the State and local levels. However, the federal government is involved in providing funding for specialized programs such as school breakfasts and lunches, programs under Title 1 of the Elementary and Secondary Education Act, programs for special education, and programs that fall under the School-to-Work Opportunities Act and Goals 2000: Educate America Act. Such funds are unavailable for general educational purposes.

4.12.2.2 State

Leroy F. Greene School Facilities Act (Senate Bill 50) and California Education Code 17620

Senate Bill (SB) 50 (Chapter 407, Statutes of 1998) created the School Facility Program where eligible school districts can obtain State bond funds. Education Code § 17620 provides California school districts with the authority to impose fees on new development within the district's boundaries for funding the construction or reconstruction of school facilities, subject to the limitations set forth in Chapter 4.9 (commencing with § 65995) of Division 1 of Title 7 of the Government Code. SB 50 established three levels of "developer fees," and also varies the fees within those three levels based on type of development, with the fees for residential development being the highest of the development types. The fees levied may not exceed the standard set for each type of development under the specified level. Under SB 50, the payment of developer fees is deemed complete mitigation for impacts to schools from new development. Therefore, a local agency cannot condition approval of a development project on providing more or different mitigation for school facilities.

Quimby Act

The Quimby Act (California Government Code § 66477, Subdivision Map Act), permits local cities or counties to require the dedication of land and/or the payment of in-lieu fees solely for park and recreation purposes. The required dedication and/or fee is based upon the density, cost of parklands, and various other factors. Land dedicated and fees collected pursuant to the Quimby Act may only be used for developing new, or rehabilitating existing, park or recreational facilities. The maximum dedication and/or fee allowed under current state law is equivalent to providing 3 acres of park land per 1,000 persons.

4.12.2.3 Local

East Bay Region Park District Master Plan 2013

The East Bay Regional Park District (EBRPD) is responsible for the development and operation of a regional park system in the East Bay. The most recent EBRPD Existing and Potential Parklands and Trails map, dated October 2013, marked the Point Molate Site (Project Site) as Potential EBRPD Parkland. The EBRPD supports the Bay Trail Plan, with a desired alignment along the western shoreline of the Project Site, following an existing railroad right-of-way that would continue north to the San Pablo Yacht Harbor (EBRPD, 2019a). EBRPD currently has no jurisdiction over the Modified Project nor the Project Site.

San Francisco Bay Plan

The San Francisco Bay Plan (Bay Plan) contains information that describes the values associated with the Bay, policies regarding future uses of the Bay and its shoreline, and maps that direct the protection and development of the Bay and its tributary waterways, marshes, managed wetlands, salt ponds, and shoreline in accordance with these policies. **Figure 4.9-1** shows the Bay Plan Map No. 4 priority use designation for the Project Site as Waterfront Park, Beach, and Scenic Drive (Stenmark Drive). As noted in the Bay Plan, all of the policies listed in conjunction with the Bay Plan Maps are “enforceable policies and have the same authority as the policies in the text of the Bay Plan” (Bay Conservation and Development Commission [BCDC], 2019) for areas within BCDC’s jurisdiction. The Bay Plan policies presented in conjunction with Plan Map No. 4 that are relevant to the development of parks and recreation areas on the Project Site are provided in **Section 4.9.2.3** of the Land Use and Planning chapter of this Draft Subsequent Environmental Impact Report (SEIR). The Project Description Chapter describes the Modified Project’s proposed amendments to the Bay Plan. The following policies in the Bay Plan are relevant for this project.

Part IV: Recreation

1. Diverse and accessible water-oriented recreational facilities, such as marinas, launch ramps, beaches, and fishing piers, should be provided to meet the needs of a growing and diversifying population, and should be well distributed around the Bay and improved to accommodate a broad range of water-oriented recreational activities for people of all races, cultures, ages, and income levels. Periodic assessments of water-oriented recreational needs that forecast demand into the future and reflect changing recreational preferences should be made to ensure that sufficient, appropriate water-oriented recreational facilities are provided around the Bay. Because there is

no practical estimate of the acreage needed on the shoreline of the Bay, waterfront parks should be provided wherever possible.

2. Waterfront land needed for parks and beaches to meet future needs should be reserved now, because delay may mean that needed shoreline land could otherwise be preempted for other uses. However, recreational facilities need not be built all at once; their development can proceed over time. Interim use of a waterfront park priority use area prior to its development as a park should be permitted, unless the use would prevent the site from being converted to park use or would involve investment in improvements that would preclude the future use of the site as a park.
3. Recreational facilities, such as waterfront parks, trails, marinas, live-aboard boats, non-motorized small boat access, fishing piers, launching lanes, and beaches, should be encouraged and allowed by the Commission [BCDC], provided they are located, improved and managed consistent with the... standards [set forth within the Bay Plan].
4. To assure optimum use of the Bay for recreation, the following facilities should be encouraged in waterfront parks and wildlife refuges.
 - a. In waterfront parks. (1) Where possible, parks should provide some camping facilities accessible only by boat, and docking and picnic facilities for boaters. (2) To capitalize on the attractiveness of their Bayfront location, parks should emphasize hiking, bicycling, riding trails, picnic facilities, swimming, environmental, historical and cultural education and interpretation, viewpoints, beaches, and fishing facilities. Recreational facilities that do not need a waterfront location, e.g., golf courses and playing fields, should generally be placed inland, but may be permitted in shoreline areas if they are part of a park complex that is primarily devoted to water-oriented uses, or are designed to provide for passive use and enjoyment of the Bay when not being used for sports. (3) Where shoreline open space includes areas used for hunting waterbirds, public areas for launching non-motorized small boats should be provided so long as they do not result in overuse of the hunting area. (4) Public launching facilities for a variety of boats and other water-oriented recreational craft, such as kayaks, canoes, and sailboards, should be provided in waterfront parks where feasible. (5) Except as may be approved pursuant to recreation policy 4-b, limited commercial recreation facilities, such as small restaurants, should be permitted within waterfront parks provided they are clearly incidental to the park use, are in keeping with the basic character of the park, and do not obstruct public access to and enjoyment of the Bay. Limited commercial development may be appropriate (at the option of the park agency responsible) in all parks shown on the Plan maps except where there is a specific note to the contrary. (6) Trails that can be used as components of the San Francisco Bay Trail (Bay Trail), the Bay Area Ridge Trail or links between them should be developed in waterfront parks. Bay Trail segments should be located near the shoreline unless that alignment would have significant adverse effects on Bay resources; in this case, an alignment as near to the shore as possible, consistent with Bay resource protection, should be provided. Bay Area Ridge Trail segments should be developed in waterfront parks where the ridgeline is close to the Bay shoreline. (7) Bus stops, kiosks, and other facilities to accommodate public transit should be provided in waterfront parks to the maximum extent feasible. Public parking should be provided in a manner that does not diminish the park-like character of the site. Traffic demand management strategies and alternative transportation systems should be developed

where appropriate to minimize the need for large parking lots and to ensure parking for recreation uses is sufficient. (8) Interpretive information describing natural, historical, and cultural resources should be provided in waterfront parks where feasible. (9) In waterfront parks that serve as gateways to wildlife refuges, interpretive materials, and programs that inform visitors about the wildlife and habitat values present in the park and wildlife refuges should be provided. Instructional materials should include information about the potential for adverse impacts on wildlife, plant, and habitat resources from certain activities. (10) The Commission [BCDC] may permit the placement of public utilities and services, such as underground sewer lines and power cables, in recreational facilities provided they would be unobtrusive, would not permanently disrupt use of the site for recreation, and would not detract from the visual character of the site.

- b. In waterfront parks and wildlife refuges with historic buildings.
- 5. Bay resources in waterfront parks and, where appropriate, wildlife refuges should be described with interpretive signs. Where feasible and appropriate, waterfront parks and wildlife refuges should provide diverse environmental education programs, facilities, and community service opportunities, such as classrooms and interpretive and volunteer programs.

Part IV: Public Access

- 2. In addition to the public access to the Bay provided by waterfront parks, beaches, marinas, and fishing piers, maximum feasible access to and along the waterfront and on any permitted fills should be provided in and through every new development in the Bay or on the shoreline, whether it be for housing, industry, port, airport, public facility, wildlife area, or other use, except in cases where public access would be clearly inconsistent with the project because of public safety considerations or significant use conflicts, including unavoidable, significant adverse effects on Bay natural resources. In these cases, in lieu access at another location preferably near the project should be provided.
- 5. Public access that substantially changes the use or character of the site should be sited, designed, and managed based on meaningful community involvement to create public access that is inclusive and welcoming to all and embraces local multicultural and indigenous history and presence. In particular, vulnerable, disadvantaged, and/or underrepresented communities should be involved. If such previous outreach and engagement did not occur, further outreach and engagement should be conducted prior to Commission [BCDC] action.
- 13. The Public Access Design Guidelines should be used as a guide to siting and designing public access consistent with a proposed project. The Design Review Board should advise the Commission [BCDC] regarding the adequacy of the public access proposed.

City of Richmond General Plan 2030

The City of Richmond's (City) General Plan 2030 (General Plan) provides goals and policies with regard to public services and recreation for areas within the City, including the Project Site. There are also specific guidelines for areas of the City including the Project Site, which is a part of the West Shoreline Planning Area. A summary of the consistency of the Modified Project with the General Plan is included as **Appendix L**. The following goals and policies are related to public services and recreation and therefore may be relevant to the Modified Project.

- GOAL CF1** **Facilities that Serve a Diverse Range of Community Needs.** The City seeks to provide a broad range of high-quality facilities and infrastructure to serve a diverse range of community needs. Facilities should be universally accessible and appropriately programmed to meet community needs. Infrastructure should be maintained and expanded to meet current and future needs and to provide effective, equitable, and consistent levels of service to all neighborhoods.
- Policy CF1.4** **Concurrent Infrastructure Development.** Require new development to provide proportionate facilities and infrastructure improvements as it occurs. New developments must mitigate impacts or contribute adequate infrastructure to meet additional demand for roads, parks, schools, and utilities.
- GOAL ED1¹** **An Appealing Place to Live and Work.** Foster neighborhoods, commercial and industrial areas, and public spaces that are safe and welcoming environments to live, work, and visit. Effective public safety services, neighborhood revitalization efforts, opportunities for cultural and recreational activities, affordable housing, socially and environmentally responsible businesses, and a diverse and expanded tax base will contribute to this environment.
- Policy ED1.1** **Safe, Well-Maintained Neighborhoods and Public Spaces.** Reduce crime and violence and maintain safe and clean neighborhoods and public spaces. Poorly maintained and underutilized streets and property can detract from the image of the City as a viable place to live and do business. Assertive code enforcement by the City will help ensure that neighborhoods are safe and retain their value.
- Policy ED1.2** **High Quality Infrastructure and Public Services.** Provide a range of high quality infrastructure and public services for residents and visitors. Adequate and well-maintained infrastructure such as streets, freeways, and utilities are essential for improving the quality of life for residents and attracting businesses to locate in Richmond [the City]. Public amenities such as schools, libraries, parks, emergency and public safety services, and public transit add to the attractiveness of a community.
- Policy ED1.7** **Richmond's Waterfront as a Community Amenity.** Continue to redevelop the waterfront of the City as a publicly accessible amenity to attract new residential and commercial development and provide expanded recreational activities and open space. Parks within the City should be maintained and enhanced to maximize their benefit to the community, and serve as an attraction for new businesses.
- Goal ED7¹** **Mixed-Uses along the Richmond Parkway.** Transform the Richmond Parkway into an attractive thoroughfare that provides access to clean and well-maintained

¹ This goal does not specifically address public services and recreation. However, the policies following the goal concern public services and recreation and are included in the General Plan to support this goal. Therefore, this goal is included in this SEIR to provide regulatory context for the relevant policies.

industrial zones, economically well-served residential neighborhoods and open space areas. Support the Parkway's emergence as a new district of Richmond that is characterized by improved landscaping, streetscape and building design.

Policy ED7.3 ***Open Space, Natural Habitat, and Recreation.*** Encourage open space, natural habitat, and recreational opportunities along the shoreline. Work with the East Bay Regional Park District [EBRPD] to improve facilities, highlight the presence of the shoreline, and develop complementary businesses to serve visitors and protect the natural habitat along the shoreline. Open space along the Richmond Parkway, particularly Point Pinole Regional Shoreline, represents an underutilized resource for the community.

Goal ED8¹ ***A Thriving Mixed-Use Neighborhood along the Southern Shoreline.*** Transform the Southern Shoreline into a model mixed-use neighborhood characterized by green development, parks and open space, a fully developed university research and development campus, new employment centers, attractive residential communities, a connection to regional ferry services, an accessible shoreline and a modern port. Incorporate a range of commercial uses including industrial activities, high-technology and professional firms and a local-serving retail, as well as medium to higher-density housing outside of the Harbour Way-Marina Way South Industrial Buffer Zone (referred to in the Land Use and Urban Design Element as the Transitional Zone Overlay District) and other designated buffers. Expand public improvements along the Southern Shoreline to offer access to the Richmond waterfront for recreational activities which take advantage of impressive Bay views.

Policy ED8.4 ***Public Access to the Shoreline.*** Improve public access to the shoreline. Support the expansion of trails, viewpoints, and supporting infrastructure to fully capitalize on the prime access to the Bay from the shoreline, while protecting natural resource areas such as marshlands and wetlands. Promote recreational activities, such as hiking, biking, kayaking, bird watching, and fishing, that respect the Bay and enhance the shoreline as a valuable resource for the community.

GOAL LU3¹ ***Expanded Economic Opportunities.*** Expand economic opportunities in existing commercial and industrial areas and develop new opportunities to diversify the local economy. Create an attractive and socially-responsible business environment that will support business recruitment, expansion and retention. Encourage innovative, high-growth and green business, and further support businesses and industries in providing a range of job and entrepreneurial opportunities while minimizing environmental and health impacts. In building a thriving local economy, develop a skilled and educated workforce that can strengthen existing businesses and emerging industries. Establish Richmond as a major employment center in Contra Costa County and along the Interstate 80 and 580 corridors by expanding and diversifying the local employment base. Capitalize on Richmond's amenities and convenient location in order to attract new businesses to the Southern Shoreline, Hilltop, Downtown, the Port and surrounding industrial areas. Transform the Hilltop

Area, the Southern Shoreline and the Richmond Parkway as mixed-use regional destinations and employment centers. Leverage Richmond's rich cultural, historical and natural amenities to ignite a vibrant cultural-heritage and tourism industry

Policy LU3.3 **Recreation and Tourism Industry.** Support the emerging recreation and tourism economy by protecting, enhancing, and showcasing the natural, cultural, and historic resources and assets. Encourage the creation of tourist-serving amenities and infrastructure in key areas such as the Southern Shoreline, Point Molate, and Downtown, and enhance amenities in existing tourist destinations such as Point Richmond. Expand and complete the Bay Trail to enhance regional connections with shoreline in the City. Support the development of the southern shoreline as the "Richmond cultural heritage shoreline" to promote economic development in the City while protecting historic and cultural resources and providing opportunities for interpretation, education, and recreation.

GOAL LU5¹ **Balanced and Compatible Uses.** Achieve a mix of land uses that is ecologically, economically and socially equitable and sustainable. Encourages a mix of uses in major activity centers, community nodes and gateways, in neighborhood nodes and along key corridors as well as in some industrial areas. Using this pattern and range of land uses, activate focal areas of the City throughout the day and evening, and provide convenient access to goods, services and community amenities.

Policy LU5.2 **A Mixed-Use Waterfront.** Continue to create a dynamic mixed-use waterfront that includes amenities and attractions for residents and visitors. There are a number of different uses, features, and assets along Richmond's [the City's] shoreline that can be enhanced to create a series of distinct places along the waterfront.

The San Pablo Peninsula is characterized by large natural open spaces, shoreline parks and beaches, sweeping views of the San Francisco Bay Area and historic structures. The City will support development on the Peninsula as a regional recreation destination that is well connected to rest of the City and accessible to the greater community. Disturbed sites such as the Winehaven complex at Point Molate and the Terminal 4 site at Point San Pablo will be remediated and redeveloped into mixed-use activity centers to serve a broad range of visitors and provide long-term revenue to the City.

The Richmond Port (public and private) is recognized as a productive and important component of the community's economy and identity. Many of the adjacent industries embrace high standards and provide high-wage, local jobs. Creative transitions should be developed between port related activities and potential mixed-used neighborhoods along the waterfront to provide strong connections, design cohesion and effective buffers where necessary.

The Ford Peninsula in Marina Bay is a gateway to Richmond [the City] and an integral part of the City where people work, live, and recreate. The Peninsula's

historic Ford Assembly Plant, open space, connection to the Bay Trail and convenient freeway access present great potential for developing the eastern portion of the area as an active mixed-use neighborhood that will attract visitors from around the Bay. In February 2006, the City Council passed Resolution No. 15-06 to support and promote the location of the proposed ferry terminal. Ferry transit to San Francisco will enhance the Southern Shoreline's appeal to residents and businesses.

- GOAL PR4** ***Stewardship of the Natural Environment.*** Improve access to natural environments as appropriate to varying levels of habitat sensitivity. Doing this will: contribute to Richmond's overall system of parks; enhance public enjoyment; provide public health benefits; offer convenient opportunities for hands-on experiences in nature; and potentially strengthen stewardship and ongoing support for open space preservation. Increase opportunities for contact with nature on a smaller scale by designing urban parks and play areas to incorporate natural features such as unstructured natural settings or creeks. Contribute to raising public awareness of natural and cultural resources and the value of connecting people to nature by encouraging interpretive features in the landscape and public education.
- Policy PR4.1*** ***Access to Large-Scale Natural Areas.*** Improve access to large-scale natural areas located in the City including regional parks along the shoreline and in the hills. These areas should be open for controlled access to improve public enjoyment and interpretation. Access should be limited where natural habitat is extremely sensitive. Work with transit agencies to improve connections and access to open space and recreation facilities from all neighborhoods in the City. (*Same as Policies CN2.5 and HW1.7*)
- Policy PR4.2*** ***Shoreline Access and Development.*** Enhance public access to and encourage development of water-dependent sports and recreation activities, such as kayaking, sailing, sail and kite boarding, swimming, and fishing along the shoreline in the City to encourage environmental awareness and improve public health and fitness. (*Same as Policy HW1.8*)
- GOAL PR1** ***An Integrated System of Parks, Green Streets, and Trails.*** Develop strategies that will expand the system of large and small open spaces and community facilities linked together along natural creek channels, pedestrian-friendly green streets and multimodal corridors from the hills to the bay. Coordinate park development and upgrades with pedestrian and bicycle improvements to safely and comfortably connect residents to valuable recreational destinations. Create a system of parks that equitably serves diverse community needs, offers a range of park types, facilities and activities and highlights natural features wherever possible. Provide more transit opportunities to improve access to parks and recreation facilities.
- Policy PR1.1*** ***Diverse Range of Park Types and Functions.*** Continue to provide a diverse range of park types, functions, and recreational opportunities to meet the physical and social needs of the community. (*Same as HW1.2*)

- Policy PR1.3** ***Equitable Distribution of Park and Recreation Facilities.*** Expand park and recreation opportunities in all neighborhoods and ensure that they are offered within comfortable walking distance of homes, schools, and businesses in order to encourage more physically and socially active lifestyles. Continue to implement the parkland development standard of 3 acres of community or neighborhood parkland per 1,000 in population in each neighborhood planning area. This represents a minimum provision which should be exceeded whenever possible. In established neighborhoods where land availability for new large parks is limited, prioritize improvement and maintenance of compact parks, play lots, and plazas to increase access to recreation opportunities for residents. Encourage developers to meet the park development standards of the City within their proposed development projects. *(Same as HW1.9)*
- Policy PR1.4** ***Joint-Use Opportunities.*** Promote access to non-City operated parks and recreational facilities. Existing resources operated by the East Bay Regional Parks District [EBRPD], school district, community groups, or others may support the interim needs of residents for convenient access to parks and community centers. Joint-use opportunities serve to more efficiently utilize existing facilities and amenities, host programs in convenient neighborhood locations, better activate community areas so that they are in use during the day and evenings, and enable the City and its partners to share the cost of maintenance, upgrades, and improvements for the benefit of the entire community. *(Same as HW1.5)*
- GOAL PR2** ***Safe and High-Quality Parks and Recreational Facilities.*** Provide safe, high-quality, distinctive parks that support secure places for social interaction, community identity, beauty and livability. Base park designs on the unique cultural, historic and environmental setting of an area so that each park is distinctive. Promote safety and activate parks by programming for broad appeal, encouraging flexible spaces to accommodate a wide range of experiences and utilizing natural and technological surveillance measures.
- Policy PR2.2** ***Safe Public Spaces and Facilities.*** Protect visitors of parks and recreational facilities from exposure to structural and safety hazards, wildland fires, crime, and other natural or human-induced incidents and promote park and facility design that discourages vandalism, deters crime, provides natural surveillance, and creates a safe and comfortable environment. Improving public safety can be accomplished by appropriately designing parks, trails, and recreation facilities, and by providing safe outdoor play structures and equipment in City-owned and operated facilities. Ensure fire safety in areas adjacent to open spaces prone to wild fires. *(Same as HW1.6)*
- Goal HW3¹** ***Improved Access to Medical Services.*** Promote improved access to primary and emergency health care facilities and medical services for all residents. Convenient transportation options allow people of all ages, physical abilities and socioeconomic status to access medical assistance.

Policy HW3.3 *Emergency and Disaster Preparedness.* Maintain staff and facilities that will continue to support a coordinated and effective response to emergencies and natural disasters throughout the City. Coordinate with neighboring jurisdictions, local employers, and industries to ensure that emergency preparedness and disaster response programs equitably serve all parts of the City. Continue to maintain adequate police and fire staffing, facilities, equipment, and maintenance in order to protect the community. (*Same as SN3.1*)

Richmond Parks Master Plan

The Parks Master Plan provides both a long-term vision for the City park system, and specific policies and standards to direct day-to-day decisions. Areas examined in this document include identifying and evaluating the existing system; assessing the need for additional park land, open space, and specialized facilities; establishing criteria and standards for site selection, design, and management of the various areas; and recommending an approach to funding maintenance, acquisition, and development of facilities. The need for additional parkland is based on the City standard of 3 acres of community or neighborhood parkland per 1,000 residents (City of Richmond, 2010).

The Parks Master Plan notes that opportunities for the Point Molate Beach Park are dependent upon the development plans for the surrounding area, but could include development as a master trailhead for the Bay Trail (City of Richmond, 2010).

Richmond Municipal Code (RMC) § 15.04.708.030 - Park and Recreation Dedication and Fees

In accordance with the Quimby Act, the City's Park and Recreation Dedication and Fees Ordinance requires a subdivider of land for residential purposes to dedicate land, pay a fee in lieu thereof, or both at the option of the City, for park and recreational purposes as a condition of approval of a Tentative Map or Vesting Tentative Map. The general standard for land dedication and for determining the in lieu fee is 3 acres of land per 1,000 residents.

RMC Chapter 12.63 - Library Impact Fee

The purpose of this chapter is to establish a library impact fee for future residential and commercial development projects, an equitable share of the cost of mitigating library book and space needs created by such projects. Except for those that are exempt from this fee (e.g., educational institutions), developers of residential and commercial development projects shall pay a library impact fee in an amount established by resolution of the City Council.

RMC Chapter 12.64 - Public Facilities Fee

The purpose of this chapter is to provide a method for the equitable and consistent collection of fees for public improvements and facilities which are needed to serve the developing areas of the City. Applicants for a building permit for new residential or business development in any one of the designated developing areas, a public facilities fee payable to the City, at the time of issuance of said building permit can be

subject to this chapter. The specific amount of said public facilities fee shall be determined based upon resolution of the City Council relating to the developing area in which the development is located.

RMC Chapter 12.65 - Public Facilities Impact Fees

The purpose of this chapter is to provide a method for the equitable and consistent collection of fees for public improvements and facilities which are needed to serve the developing areas of the City. The City Council may establish, by resolution, a developing area. There is authorized to be imposed upon each applicant for a building permit for new residential or business development in any one of the designated developing areas, a public facilities impact fee payable to the City, at the time of issuance of said building permit. For residential development, the City Council may approve payment of fees at completion of the development, consistent with requirements and procedures of any applicable State statute. The specific amount of said public facilities impact fee shall be determined based upon a resolution of the City Council relating to the developing area in which the development is located.

4.12.3 ENVIRONMENTAL SETTING

Information provided in this section is derived from a number of sources, including the Point Molate Reuse Plan (Appendix D of the 2011 FEIR), personal correspondence with public service providers, and publicly available information on fire protection, police, emergency, educational, recreational, and other public services within City. This analysis focuses on the manner in which development could alter baseline conditions, which are defined for the purposes of the analysis in this section as physical conditions on or around the publication of the Notice of Preparation (NOP) in July 2019.

4.12.3.1 Fire Protection and Emergency Services

Richmond Fire Department

The Richmond Fire Department provides fire protection and emergency medical services within a 56-square-mile service area that consists of the incorporated areas of the City, including the Project Site (City of Richmond, 2019c). The Richmond Fire Department retains aid agreements with Contra Costa County (County) Fire and El Cerrito Fire (City of Richmond, 2018a). Funding for the Richmond Fire Department is provided through the City budget, and the department comprises of programs administration, support services, fire prevention, emergency services, a training division, and emergency operations (City of Richmond, 2018a). In total, there are 90 sworn officers and five non-sworn employees within the Richmond Fire Department, and the Office of Emergency Services is the largest department. Within this department, there are three platoons that are operated by eight companies, seven engines, and one truck. The companies are staffed by 24 personnel who are supervised by one battalion chief (City of Richmond, 2017).

The Richmond Fire Department offers basic life support level of emergency care. In 2017, there were 12,890 calls for service (City of Richmond, 2017), and an approximate breakdown of calls by incident is provided in **Table 4.12-1**. The Richmond Fire Department currently abides by the National Fire Protection Association (NFPA) Standard for Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments (NFPA 1710) response times. This requires that the turnout time (from initial dispatch to the responding

notification) be 80 seconds for fire incidents and 60 seconds for emergency medical services (EMS) incidents. Travel time to a fire suppression incident, by the initial arriving company, should be 4 minutes or less (Usher, 2019). Fire personnel are allocated to seven fire stations in the City. Equipment for the department includes seven engine companies (one at each station), one truck company, one cross-staffed truck company, two rescue units, a hazardous materials unit, one breathing support unit, and one fire boat (City of Richmond, 2017). The closest station to the Point Molate Site is Station 61, located at 140 W. Richmond Avenue, approximately 3 miles to the southeast. The next two closest stations are Stations 62 and 67. Response times to the Project Site are approximately 6 minutes (2011 FEIR). The Project Site is designated by the City as being in a Very High Fire Hazard Severity Zone (City of Richmond, 2006). In these areas, fire reduction standards are more extensive, including specialized vegetation management for property, building design standards, property maintenance requirements, firebreaks when appropriate, and possibly additional mitigation measures by the Fire Chief should the Richmond Fire Department response time be greater than 6 minutes (for details, refer to **Section 4.7.2**).

TABLE 4.12-1
FIRE DEPARTMENT SERVICE CALLS 2017

Type	Number
Emergency Medical	8,239
Structure Fires	795
False Alarms	732
Hazardous Materials	274
Service Calls	371
Good Intent Calls	2,467
Miscellaneous	12
Total	12,890
Source: City of Richmond, 2017.	

In addition to providing basic emergency care, the Richmond Fire Department Office of Emergency Services leads comprehensive emergency management. This includes planning and preparedness for, response and recovery from, and mitigation of natural, man-made, and accidental incidents with a major aftermath. The Office of Emergency Services coordinates with neighboring agencies across the County and the nation to collaborate on and establish the best emergency response and recovery efforts in the event of a major disaster. As part of its operations efforts, the Office of Emergency Services maintains in a state of operational readiness the City Emergency Operation Center and Community Emergency Response Teams program across the City (City of Richmond, n.d.a).

Chevron®-Richmond Refinery

There is a mutual aid agreement between the Richmond Fire Department and the Chevron®-Richmond Refinery fire and emergency personnel. The Project Site and vicinity are served by the Richmond Fire Department; however, the Chevron®-Richmond Refinery can be asked to assist if additional fire and emergency services are required.

Contra Costa County Emergency Operations Plan

The function of the Contra Costa County Emergency Operations Plan is to provide the basis for a coordinated response before, during, and after an emergency affecting the County. This Plan applies to primarily the unincorporated areas of the County, but also to incorporated areas to the extent that multi-agency coordination is required at the operations level. The administrator of emergency services assumes the ultimate responsibility and authority for directing the Contra Costa Operational Area's emergency management organization and is supported by the Contra Costa County Sheriff's Office of Emergency Services.

Emergency Medical Services

Emergency medical services to the Project Site are coordinated by the Contra Costa Health Services. Initial calls are received at a joint police/fire dispatcher and emergency medical calls are then transferred to American Medical Response (AMR) for ambulance service. AMR provides ambulance service for the areas within the County (AMR, 2019). Air ambulance services are provided by a number of companies, including California Shock Trauma Air Rescue, Redwood Empire Air Care Helicopter, and Stanford Life.

Ambulances take patients needing hospital services to the nearest or most appropriate hospital depending on the need for trauma, burn care, or pediatric care. The nearest hospital to the Project Site is the Kaiser Richmond Medical Center, located 5 miles southeast of the Project Site at 901 Nevin Avenue in Richmond. The nearest urgent care centers are LifeLong Immediate/Urgent Care - San Pablo (150 Harbour Way in Richmond) and Action Urgent Care (11450 San Pablo Avenue in Richmond), located approximately 5 miles east and 9 miles southeast of the Project Site, respectively.

The nearest Level III trauma center is at Marin Health Medical Center, located 10 miles west of the Project Site at 250 Bon Air Road in Greenbrae. The nearest Level I trauma center is at Highland Alameda County Medical Center, located 17 miles southeast of the Project Site at 1411 E 31st Street in Oakland.

4.12.3.2 Police Services

City of Richmond Police Department

The City of Richmond Police Department is the chief police agency serving the Project Site. The service area for the Department encompasses 52 square miles of land and 32 miles of shoreline. The Department is divided into the patrol, investigation, and administration divisions (Walle, 2019). The main station is located at 1701 Regatta Boulevard in Richmond.

The Richmond Police Department is staffed with approximately 178 sworn officers and 67 non-sworn officers (City of Richmond, 2018), and a 64-vehicle fleet (Walle, 2019). Using census population data for the City from **Table 4.11-1** (108,853), there is a ratio of approximately 1.6 sworn officers for every 1,000 City residents; currently, the Department has a goal of 2 sworn officers per 1,000 residents (City of Richmond, 2018a). The average response times in regards to the different priorities calls are presented in **Table 4.12-2**, and there are no minimum response time standards for the Richmond Police Department (Walle, 2019). There are nine beat areas within the City with 6 to 13 officers in each beat. The Project Site is in the Southern District of the Department that encompasses much of the shoreline portion of the City; there are three beats within the Southern District (City of Richmond, n.d.b). Officers operate in three

overlapping shifts (day shift, swing shift, and graveyard shift) that provide coverage 24 hours a day, 7 days a week, 365 days a year. In addition to the officers in the beat, there are foot and bicycle patrol officers and crime scene investigators. A marine unit with six police officers and three patrol boats also patrols the shoreline with the City and the Bay (City of Richmond, n.d.b).

TABLE 4.12-2
AVERAGE POLICE RESPONSE TIME

	Average time from the service call to dispatch (minutes)	Average time from dispatch call to officer en route (minutes)	Average time from officer en route to arrival at scene (minutes)
Priority 1 (Emergency Call)	1.8	1.3	7.5
Priority 2 (Emergency Call)	10.7	0.2	5.6
Priority 3	13.4	0.2	5.0
Priority 4	21.7	1.0	7.0
Priority 5	0.7	0.0	0.4
Priority 6	85.9	0.2	18.3
Priority 7	74.9	0.0	1.2
Priority 8	128.3	0.0	0.0
Priority 9	25.4	0.2	6.2
Source: Walle, 2019.			

Contra Costa Sheriff's Department

There is a mutual aid agreement between the City of Richmond Police Department and the Contra Costa County Sheriff's Department (Walle, 2019). The Project Site and vicinity are served primarily by the City of Richmond Police Department; however, the Contra Costa County Sheriff's Department can be asked to assist if additional police services are required.

On-Site Security

The Project Site is currently maintained by City staff and patrolled daily by a private security company hired by the City.

4.12.3.3 Public Schools

The City and the surrounding cities of El Cerrito, San Pablo, Pinole, Hercules, and unincorporated western portions of the County are served by the West Contra Costa Unified School District (WCCUSD). In the 2018-2019 enrollment year, the WCCUSD had approximately 28,000 students enrolled in its non-charter K-12 programs: 16,246 elementary school students, 3,608 middle school students, 7,567 high school students, and 566 alternative school students. The Project Site is within two school boundaries for elementary, intermediate, and high school level education (all non-charter schools). For elementary schools, the Project Site is located within Washington Elementary School and Verde Elementary School boundaries. Washington Elementary is the closest elementary school to the Project Site, located approximately 3 miles away at 565 Wine Street, and Verde Elementary School is located approximately 4 miles away at 2000 Giaramita Street. For intermediate schools, the Project Site is located

within the Fred T. Korematsu Middle School and Helms Middle School boundaries. Helms Middle School is the closest of these two middle schools to the Project Site, located approximately 6 miles away at 2500 Road 20, and Fred T. Korematsu Middle School is located approximately 9.3 miles away at 7125 Donal Avenue. For high schools, the Project Site is located within the Richmond High School and John F. Kennedy High School boundaries. Richmond High School is the closest high school to the Project Site, located approximately 4.5 miles away at 1250 23rd Street, and John F. Kennedy High School is located approximately 4.5 miles away at 4300 Cutting Boulevard. Enrollment for all the above mentioned schools and their master planning capacities can be seen in **Table 4.12-3**.

WCCUSD schools receive funding from the Local Control Funding Formula, other state and local revenue, Maintenance and Recreation Assessment District, parcel tax, and restricted and unrestricted district revenues (WCCUSD, 2019b).

TABLE 4.12-3
SCHOOL ENROLLMENT AND CAPACITY

School	Enrollment 2018–2019	Master Planning Capacity
Washington Elementary School	465	412
Verde Elementary School	344	334
Helms Middle School	864	1,283
Fred T. Korematsu Middle School	696	600
Richmond High School	1,567	1,496
John F. Kennedy High School	851	1,437
Source: WCCUSD, 2016; WCCUSD, 2019a.		

4.12.3.4 Parks and Recreation

Federal

The nearest federally operated park to the Project Site is the Rosie the Riveter/World War II Home Front National Historical Park. This park is located approximately 5.5 miles southeast of the Project Site. Rosie the Riveter/World War II Home Front National Historical Park has a World War II historical theme and includes historical structures from the World War II era. Activities and attractions at this park include the Rosie the Riveter Memorial, ranger and docent programs, and the Red Oak Victory Ship (National Park Service, 2019).

State

The nearest State Park to the Point Molate Site is the McLaughlin Eastshore State Park, located 8.75 miles to the southeast. This park includes 8.5 miles of Bay shoreline with tidelands and upland property, but only select areas of the park are open to the public. Recreational activities available at the park include hiking, biking, and bird watching. A portion of the Bay Trail will traverse McLaughlin Eastshore State Park and connect the entire park once completed (California Department of Parks and Recreation, 2019).

Regional

The EBRPD provides access to 73 parks, covering a total of 125,000 acres throughout Contra Costa and Alameda counties. Activities at these parks include hiking, biking, picnicking, horseback riding, camping, fishing, boating, and golfing (EBRPD, 2019a). The nearest EBRPD park to the Project Site is the Miller/Knox Regional Shoreline, approximately 2 miles to the southeast. This park includes Keller Beach, a historic ferry terminal, restrooms, and picnic tables with activities such as hiking, fishing, and swimming (EBRPD, 2019b). The Land Use Plan Amendment for Miller/Knox Regional Shoreline was approved on March 19, 2019 by the Board of Directors. This Amendment recommends both programs for conserving and managing park resources and presents recreational use proposals for the future (EBRPD, 2019c).

City

The City of Richmond Parks and Landscaping Division maintains a series of parks, facilities, public landscapes, and natural open spaces open to the public. The Division oversees 74 parks and open spaces that comprise approximately 777 acres within the City and maintains the urban forest landscape. The City Parks Division provides services such as picnic areas, barbecue areas, playgrounds, sports fields and/or courts, lawn areas, and restrooms. The nearest off-site City park is Judge Carroll Park. This 2.5-acre park is approximately 3 miles southeast of the Project Site. The Point Molate Beach Park, maintained by the City Parks Division, is located within the Project Site and has been open to the public since 2013 (City of Richmond, 2018b). This park contains picnic tables, a mixed sand and gravel beach, and views of the Richmond-San Rafael Bridge and the hills of Marin County across the Bay. The City has a goal to have 3 acres of parks for every 1,000 residents. There are currently approximately 7.1 acres of City-owned parks for every 1,000 residents in the City (based on the current population shown in **Table 4.11-1**).

San Francisco Bay Trail

The Bay Trail is a recreational corridor that has yet to be fully completed. The Bay Trail is designed to encircle the San Francisco and San Pablo Bays, connecting the shoreline of all nine Bay Area counties, with a 500-mile network of trails for bicycling and hiking. The section of the trail that is planned within the Project Site can be seen in **Figure 3-10**. Approximately 70 percent, or 355 miles, of the trail network has been completed (Association of Bay Area Governments [ABAG], 2019). The Bay Trail Plan was adopted in 1989 (San Francisco Bay Trail, 2019), and the nonprofit San Francisco Bay Trail Project was created in 1990 to plan and promote implementation of the Bay Trail by making grant funds available for trail construction and maintenance, participating in planning efforts, educating the public and decision-makers about the benefits of the Bay Trail, and producing maps and other materials to publicize the Bay Trail (ABAG, 1999). The Bay Trail Project, administered by ABAG, does not own land or construct the trail segments. Segments of the trail are built, owned, managed, and maintained by local, regional, state, and federal agencies with jurisdiction over the trail segments (ABAG, 2019).

The existing Bay Trail within the City runs along the southern shoreline from Point Isabel through Marina Bay, turning inland at Garrard Avenue and running north along Richmond Parkway. Separated loops are established along Keller Beach and Seaclyff Drive to the South, and around a section of the West County Landfill to the North. An easement has been provided through Chevron® property, creating a future trail spur from Marine Street and Tewksbury under Interstate 580 connecting with Western Drive (City of

Richmond, 2008). A 2001 Baseline Feasibility Study of Bay Trail Routes to the Point San Pablo Peninsula was created to plan for the future Bay Trail spur. In 2005, the Bay Trail Gap Study Analysis evaluated the current gaps along the trail system; the gap segments were then numbered and designated a priority level, for which planning and construction is based. Segments 5038 and 5040 of the Gap Study are located within the Project Site and would be implemented by the Modified Project. Segment 5038 is defined as a short-term, Class I project with a distance of 1,425 feet. Segment 5038 is characterized as an “eight” on the beneficial scale, determining that the segment holds a high value of shoreline exposure and continuity with existing or planned segments (ABAG, 2005). Segment 5040 is noted as a Class I long-term project, encompassing 8,078 feet of trail with a benefit level of eight (ABAG, 2005). In 2018, an Initial Study (IS) was published to assess the potential impacts of constructing 2.5 miles of trail through Point Molate, including a 1.5-mile section that runs through the Project Site. Possible significant environmental effects were outlined in the IS/MND and found to be less than significant with mitigation. Therefore, a Mitigated Negative Declaration (MND) was adopted for the implementation of the Bay Trail segment through Point Molate (NCE, 2018). The City and the EBRPD are currently securing the appropriate construction permits and grant funding to commence building the trail (Point San Pablo, 2019b), which would proceed regardless of the Modified Project.

4.12.3.5 Other Public Services

The City Community Services Department offers other public services in the form of community centers and public libraries. The nearest community to the Project Site is Point Richmond Community Center, located at 139 Washington Ave., approximately 2.6 miles southeast of the Project Site. The nearest library to the Project Site is Richmond Public Library, located at 135 Washington Ave., approximately 2.6 miles southeast of the Project Site.

4.12.4 2011 FEIR ANALYSIS

This section provides a summary of the impacts to public services conditions analyzed for the Casino Project of the 2011 FEIR followed by a description of changes that have occurred since the 2011 FEIR that relate to public services and recreation resources.

4.12.4.1 2011 FEIR Summary of Impacts

Impacts

The Casino Project could have resulted in substantial adverse physical impacts associated with the need for new or expanded police stations in order to maintain acceptable service ratios (1 sworn officer for every 1,000 people) and response times (3 to 5 minutes for critical or life-threatening emergency calls). This would have been a potentially significant impact. However, mitigation specified in Section 5.2.9 of the 2011 FEIR was included as part of the implementation of the Casino Project, including the hiring of new sworn officers that would have been financed entirely by the Guidiville Tribe (Tribe). This impact would have been less than significant.

The operation of the Casino Project could have resulted in substantial adverse physical impacts associated with the need for new or expanded fire stations and medical facilities to maintain acceptable response times and service ratios. Furthermore, during construction, there would have been increased

fire risks from equipment during construction, and a fire due to construction would have increased service demands on local fire protection services. However, mitigation specified in Section 5.2.9 of the 2011 FEIR would reduce the potential risk of starting a fire during construction and would have appropriately compensated for the increased service demand for fire protection and emergency services during operations. This included the building of a new, fully staffed and equipped fire station that would have been entirely financed by the Tribe. Therefore, this impact would have been less than significant.

The Casino Project would not have resulted in substantial adverse physical impacts associated with the need for new or expanded schools in order to maintain acceptable service ratios or other performance objectives for schools. The anticipated 245 new school-aged children that would have resulted from the new employees generated under the Casino Project were anticipated to evenly disperse into the schools of the WCCUSD with capacity. This would have been a less-than-significant impact.

The Casino Project would have included the creation of Tribally maintained new park and recreational facilities, such as the 35-acre Shoreline Park and 145-acre Hillside Open Space area. With this addition of a new park and open spaces, the addition of new residents was not anticipated to substantially increase the use of existing parks and recreational facilities and therefore accelerate the deterioration of these areas and facilities. Furthermore, the construction of these areas would have had minimal adverse environmental impacts. The 2011 FEIR determined that a less-than-significant impact would have occurred.

The 2011 FEIR determined that without the enforcement of building, fire safety, and other codes, the Casino Project could have resulted in the deterioration of the public health and safety of employees and patrons of the proposed facilities. A potentially significant impact would occur. However, mitigation specified in Section 5 of the 2011 FEIR would reduce the potential risk, such as following the applicable Contra Costa County Code of Ordinances for public health and safety. Therefore, the 2011 FEIR determined this impact would be less than significant.

Cumulative Impacts

The 2011 FEIR determined that the Casino Project, in combination with other foreseeable projects, would have increased service demands on the City of Richmond Police Department, City of Richmond Fire Department, and emergency services. However, the Tribe would have implemented mitigation to compensate for the costs associated with the increases in service demands due to the Casino Project. Therefore, the 2011 FEIR determined that the impact would have been *less than significant* in combination with other projects.

Developments within the WCCUSD boundary would have been charged developer fees to provide for local upgrades and expansions to local school facilities. Therefore, the 2011 FEIR determined that there would not have been a cumulative impact on schools.

The Casino Project would have included the creation of new, Tribally-maintained parks and recreational facilities, including the 35-acre Shoreline Park and 145-acre Hillside Open Space area. Therefore, the Casino Project would not have substantially deteriorated the existing recreational or regional parks. While more tourists would have been attracted to the area, overall it would have resulted in a long-term

recreational benefit for the County by providing desirable recreational facilities. Other environmental impacts associated with these facilities apart from Public Services and Recreation are examined in their respective sections within the 2011 FEIR. Therefore, a *less-than-significant* impact would have occurred.

4.12.4.2 Changes Since the 2011 FEIR

In addition to changes in the project, circumstances surrounding the project and site have changed. Since the 2011 FEIR, five police substations have been closed, including the nearest substation located at 1137 Cutting Boulevard, approximately 4 miles southeast of the Project Site. The City of Richmond Police Department has changed its sworn officer to resident ratio goal from 1 sworn officer for every 1,000 residents to 2 officers for every 1,000 residents, and now the Police Department has a marine unit with six police officers and three patrol boats that patrol the shoreline of the City and the Bay. Response time for emergency calls from police has increased from approximately 4 minutes to between 5.6 and 7.5 minutes. The Doctors Medical Center, an emergency room service provider, has also closed; Kaiser Permanente Richmond Medical Center is the only emergency room service provider in that area of the City. Since the 2011 FEIR, Point Molate Beach Park has re-opened to the public.

Appendix G of the CEQA Guidelines significance thresholds have changed slightly since 2011. The significance thresholds for public services and recreation have essentially remained the same in content.

The City adopted a new General Plan in 2012. The content pertaining to public services and recreation has primarily remained the same, but the new General Plan reorganized and rewrote the content. Furthermore, additional content pertaining to enhanced safety, disaster preparedness, integrating recreational and safety features into public facilities and spaces, collaborating with other establishments in order to enhance park and recreational activities, and providing more shoreline access have been included in the new General Plan. Service standards within the Growth Management Element of the former General Plan has been primarily eliminated in the new General Plan, including police and fire service standards.

4.12.5 IMPACTS

4.12.5.1 Thresholds of Significance

Criteria for determining the significance of impacts to public services and recreation have been developed based on Appendix G of the CEQA Guidelines and relevant agency thresholds. Impacts associated with public services and recreation would be considered significant if the Modified Project would do any of the following.

- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services: fire protection, police protection, schools, parks, and other public facilities
- Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated

- Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment

4.12.5.2 Method of Analysis

This section identifies impacts to public services and recreation resources, such as parks, that could occur from construction and operation of the Modified Project. The impact analysis for public services and recreation resources relies on published information regarding City public service providers and recreation areas, including existing capacities and service ratios. The analysis also considers the Modified Project's proposed public service facilities and recreation areas. This analysis focuses on the manner in which the Modified Project could alter the existing public services and recreation facilities in or near the Project Site under baseline conditions, which are defined as the physical conditions in the vicinity of the study area on or around the publication of the NOP in July 2019. Furthermore, because Option 1 (Residential-Heavy Option) would have greater impacts to public services and recreation resources due to having more residents than Option 2, Option 1 is assessed to determine the Modified Project's impacts in this section. Where impacts to public services or recreation facilities would exceed the significance thresholds listed above, mitigation measures have been identified to reduce impacts to the extent feasible.

4.12.5.3 Effects Found Not to be Significant Without Further Analysis

Review and comparison of the existing setting conditions and the Modified Project characteristics with the significance criteria clearly show that no impacts would be associated with the following criterion for the reasons stated below.

The off-site improvements that would be implemented by the Modified Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for Fire Protection and Police Protection.

Review and comparison of the existing setting conditions and the proposed off-site improvements associated with the Modified Project clearly show that the off-site improvement would not have the potential to create significant impacts to fire or police services because these improvements are all utility related. Because all improvements are to utilities, fire protection and police protection infrastructure would not be required to be constructed or maintained. Therefore, the improvements would not increase the population of the City, thereby increasing fire protection and police protection demands.

The new Bay Trail segment and off-site improvements that would be implemented by the Modified Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for schools.

The Bay Trail would not lead to an increase in the resident population or housing stock of the area and therefore would not create a demand for schools associated with an increase in resident population. Review and comparison of the existing setting conditions and the proposed off-site improvements associated with the Modified Project clearly show that the off-site improvement would not have the potential to create significant impacts to schools because these improvements are all utility related. Because all improvements are to utilities, schools would not be required to be constructed or maintained. Therefore, the improvements would not increase the population of the City, thereby increasing school demands.

The new Bay Trail segment and off-site improvements that would be implemented by Modified Project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated or include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

The Bay Trail would not lead to an increase in the resident population or housing stock of the area and therefore would not create a demand for recreational facilities associated with an increase in resident population. Review and comparison of the existing setting conditions and the proposed off-site improvements associated with the Modified Project clearly show that the off-site improvement would not have the potential to create significant impacts to recreation because these improvements are all utility related. Because all improvements are to utilities, recreation facilities would not be required to be constructed or maintained. Therefore, the improvements would not increase the population of the City, thereby increasing recreational demands.

The new Bay Trail segment and off-site improvements that would be implemented by the Modified Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for other public services.

The demand for maintenance activities on the bike path would not require new or expanded public facilities. There are existing maintenance programs, crews, and facilities at the City Public Works Department and EBRPD that would be used to maintain the bike path. No new public facilities would be required. Review and comparison of the existing setting conditions and the proposed off-site improvements associated with the Modified Project clearly show that the off-site improvement would not have the potential to create significant impacts to public services because these improvements are all utility related. Because all improvements are to utilities, public services facilities would not be required to be constructed or maintained. Therefore, the improvements would not increase the population of the City, thereby increasing public services demands.

4.12.5.4 Project-Level Impacts

IMPACT 4.12.1	RESULT IN SUBSTANTIAL ADVERSE PHYSICAL IMPACTS ASSOCIATED WITH THE PROVISION OF NEW OR PHYSICALLY ALTERED GOVERNMENTAL FACILITIES, NEED FOR NEW OR PHYSICALLY ALTERED GOVERNMENTAL FACILITIES, THE CONSTRUCTION OF WHICH COULD CAUSE SIGNIFICANT ENVIRONMENTAL IMPACTS, IN ORDER TO MAINTAIN ACCEPTABLE SERVICE RATIOS, RESPONSE TIMES, OR OTHER PERFORMANCE OBJECTIVES FOR FIRE PROTECTION AND POLICE PROTECTION
Significance Before Mitigation	Less Than Significant
Mitigation Measures	None Required
Significance After Mitigation	None Applicable
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

The City of Richmond Fire Department would review project plans at the time of building permit issuance to ensure compliance with all applicable state and County fire safety requirements including adequate fire and life safety measures.

As described in **Section 3.4.5**, fire protection and police protection services would be provided by a new joint fire and police substation that would be located in the boundaries of the Winehaven Historic District. Upon the completion of construction, the joint substation would be staffed by personnel from the City of Richmond Fire Department and the City of Richmond Police Department. The costs associated with constructing the substation would be financed by the Project proponent. The environmental impacts of constructing the joint station are analyzed as part of the Modified Project's analysis within the other sections of this SEIR.

The joint substation would provide fire protection and emergency medical services to the Point Molate Site. The joint substation would operate 24 hours a day. Consequently, the response time for emergencies on the Project Site would meet the City of Richmond Fire Department's goal of under 4 minutes for response to a fire suppression incident, and turnout time would be less than 80 seconds for fire incidents and less than 60 seconds for EMS incidents. Furthermore, the on-site pier would allow further access for fire and emergency services because the Richmond Fire Department's fire boat could dock and launch from this point. To provide a redundant water delivery system for emergency fire protection, the Modified Project would repair or replace the existing fire suppression water tanks in addition to obtaining East Bay Municipal Utility District water service for fire suppression. The hillside tanks would be connected to hydrants located throughout the development area by new piping (**Appendix E**). Because of the joint station and adequate water delivery system, the Modified Project would only require fire protection services from the other City of Richmond Fire stations during an extreme emergency.

In addition to providing fire and emergency services, the joint substation would provide an office space for police forces. The joint substation would be staffed by police personnel during certain hours, and an

officer from the Southern District beat would be on duty 24-hours a day. The Modified Project would decrease the current police to population ratio with its anticipated addition of 3,536 to 5,773 new residents (**Table 4.11-3**) to City. This would therefore be an adverse impact. However, during the approval process for the Modified Project, the Applicant would pay any municipal impact fees determined by City (e.g. impact to police forces). Therefore, the impact on police services is less than significant.

Development of the joint fire and police substation and associated infrastructure has been included in the analysis of the Modified Project in each issue area addressed in this Draft SEIR; the potential impacts from construction are discussed in detail in these other sections.

Construction of the Bay Trail

Impacts as a result of the construction and implementation of the Bay Trail are analyzed within the San Francisco Bay Trail at Point Molate IS/MND, which is incorporated by reference, as described within **Section 1.4.4**. The Bay Trail IS/MND determined that impacts from the construction of the Bay Trail would have result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities because the Bay Trail project would not involve construction of habitable structures, nor would it lead to a new permanent resident population requiring governmental services. Improvements to the Bay Trail would not be built with or utilize flammable, combustible, or explosive materials; therefore, limited demand for fire protection services would be generated. However, an increase in demand for police protection services could occur due to the potential for property crimes such as theft, vandalism, and graffiti on the trail improvements and the potential for personal crimes due to the presence of trail users. The trail would be closed from dusk until dawn which would help to minimize the potential for property or personal crimes such as theft and vandalism which would reduce the potential demand on police services below the level of significance. As a result, construction of the Bay Trail through the Project Site would not result in substantially adversely impacting the physical environment because no new governmental facilities must be constructed to maintain the performance, response times, or service ratios for fire and police protection, resulting in a less than significant impact.

IMPACT 4.12.2	RESULT IN SUBSTANTIAL ADVERSE PHYSICAL IMPACTS ASSOCIATED WITH THE PROVISION OF NEW OR PHYSICALLY ALTERED GOVERNMENTAL FACILITIES, NEED FOR NEW OR PHYSICALLY ALTERED GOVERNMENTAL FACILITIES, THE CONSTRUCTION OF WHICH COULD CAUSE SIGNIFICANT ENVIRONMENTAL IMPACTS, IN ORDER TO MAINTAIN ACCEPTABLE SERVICE RATIOS, RESPONSE TIMES, OR OTHER PERFORMANCE OBJECTIVES FOR SCHOOLS
Significance Before Mitigation	Less Than Significant
Mitigation Measures	None Required
Significance After Mitigation	None Applicable
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

The Modified Project would result in an anticipated net increase in population of up to 5,773 residents within the City (**Table 4.11-5**), and a portion of these new residents would be school-age children. This would increase the number of students in kindergarten through 12th grade. The majority of these students would likely enroll and disperse among the K-12 schools in the WCCUSD, including traditional public schools and charter schools. With Option 1 (**Section 3.4.1**), using the WCCUSD student generation rates (WCCUSD, 2016), estimates were calculated for the approximate number of school-age children that would be created as a result of the Modified Project. According to this estimation, approximately 363 school-age children generated by the Modified Project (**Table 4.12-4**) would enroll in the WCCUSD. This analysis assumes these students would all enroll in traditional public schools. This represents an approximate 1.3 percent increase in the school population of the City.

The Project Site is within the school boundaries of Washington Elementary School and Verde Elementary School. During the 2018–2019 school year, Washington Elementary and Verde Elementary School had an enrollment of 465 and 344 students and a master planning capacity of 412 and 334 students, respectively (**Table 4.12-3**). Neither Washington Elementary School nor Verde Elementary School have sufficient master planning capacity for the 228 elementary students generated by the Modified Project (**Table 4.12-3**), and future enrollment numbers for WCCUSD’s kindergarten through 6th grade could either slightly increase or decrease.

For intermediate schools, the Project Site is within the boundaries Helms Middle School and Fred T. Korematsu Middle School. During the 2018–2019 school year, Helms Middle School and Fred T. Korematsu Middle School had an enrollment of 864 and 696 students, and has a master planning capacity of 1,283 and 600 students, respectively. While Fred T. Korematsu Middle School does not have sufficient master planning capacity for the 13 middle students generated by the Modified Project (**Table 4.12-3**), Helms Middle School does despite the anticipated increase in future enrollment numbers for WCCUSD’s 7th through 8th grade.

For high schools, the Project Site is within the boundaries of Richmond High School and John F. Kennedy High School. During the 2018–2019 school year, Richmond High School and John J. Kennedy High School had an enrollment of 1,486 and 851 students, and has a maximum capacity of 1,496 and 1,437 students. While Richmond High School does not have sufficient master planning capacity for the 122 high school students generated by the Modified Project (**Table 4.12-3**), John J. Kennedy High School would even with potential projected increase in high school enrollment within WCCUSD. For elementary schools, it is possible that the Modified Project could create the need for new elementary facilities the construction of which could have an environmental impact.

As described in **Section 4.12.2**, California Government Code § 65995(h), enacted by SB 50, states that “the payment or satisfaction of a fee, charge or other requirement levied or imposed...[is] deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property, or any change in governmental organization or reorganization as defined in § 56021 or 56073, on the provision of adequate school facilities.” All residential development within the Modified Project would be subject to the WCCUSD residential fee in place at the time an application is submitted for a building permit. Similarly, all commercial development within the Modified Project would be subject to the WCCUSD commercial fee in place at the time an application is submitted for a building permit. Under CEQA, payment of WCCUSD development fees is

considered to fully mitigate the impacts to school facilities created by the Modified Project implementation. The Modified Project would adhere to the requirements of SB 50, and this would constitute full mitigation for impacts to school facilities caused by the increase in school enrollment in the WCCUSD from the Modified Project. If new school facilities are constructed, they would be subject to their own CEQA analysis at which time mitigation would be imposed to reduce impacts to less than significant levels or to the extent feasible. The traffic impacts caused by the Project's generation of school children is captured in the traffic impact analysis of this SEIR. Therefore, the impact to school facilities would be less than significant.

TABLE 4.12-4
ESTIMATED SCHOOL-AGED CHILDREN GENERATION

School Grades	Estimated Student Generation ¹	2018-2019 School Enrollment	Approximate Increase (%)	Conservative Projected Enrollment, 2028	Moderate Projected Enrollment, 2028
Kindergarten to 6 th Grade	228	16,246	1.4	15,763	17,255
7 th to 8 th Grade	13	3,608	0.36	3,715	3,988
9 th to 12 th Grade	122	7,567	1.6	7,368	8,061
Total	363	27,421	1.3	26,846	29,304
¹ The estimated student generation rates uses an assumption of 1,766 multi-family homes and 274 single family homes for a total of 2,040 residential units, which is Option 1.. Source: WCCUSD, 2016; WCCUSD, 2019a; WCCUSD, 2019c					

IMPACT 4.12.3	INCREASE THE USE OF EXISTING NEIGHBORHOOD AND REGIONAL PARKS OR OTHER RECREATIONAL FACILITIES SUCH THAT SUBSTANTIAL PHYSICAL DETERIORATION OF THE FACILITY WOULD OCCUR OR BE ACCELERATED OR INCLUDE RECREATIONAL FACILITIES OR REQUIRE THE CONSTRUCTION OR EXPANSION OF RECREATIONAL FACILITIES WHICH MIGHT HAVE AN ADVERSE PHYSICAL EFFECT ON THE ENVIRONMENT
Significance Before Mitigation	Potentially Significant
Mitigation Measures	Modified Project Mitigation: MM 4.12-1
Significance After Mitigation	Less Than Significant
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

As described in **Section 3.4.2**, the Modified Project would increase the open space and recreational facilities within the City, which would accommodate the potential increase in demand for recreational opportunities generated by new residents of the Project Site. These facilities include a shoreline park along the entire shoreline of the Project Site that would include, but not be limited to picnic areas (both open and reserved), park recreation facilities (such as play areas, etc.), and restrooms facilities. A paddle sport launch also may be included. This shoreline park would also include the development of an approximately 1.5-mile segment of the Bay Trail pursuant to the Bay Trail Plan design policies and

guidelines (**Figure 3-10**). The hillside land in the northeastern portion of the Project Site would be maintained as open space that would include pedestrian trails, overlook areas, and restroom facilities. In addition to the shoreline park and hillside land, interspersed within the residential development areas, neighborhood parks would be constructed as part of the Modified Project. These neighborhood parks would be part of the total open space acreage on the Project Site and include recreational amenities, such as picnic tables and playgrounds. These neighborhood parks would be open to the public and fully accessible. Development of these recreational facilities have been included in the analysis of each issue area addressed in this Draft SEIR; as discussed in detail in other sections, no significant environmental impacts would occur with the incorporation of the mitigation measures identified in those respective sections.

In order to meet the City goal of 3.0 acres of parkland per 1,000 residents, at least 17.3 acres of new parkland would be needed by the Modified Project under Option 1, which would generate approximately 5,773 residents. The Modified Project is providing a minimum of approximately 193 acres of open space, which includes hillside recreation areas with trails, a 1.5 mile long beach park, and neighborhood parks.. If for some reason the amount of parkland is less than required by the City's Quimby Act ordinance, the additional resident population that would be generated by the Modified Project would incrementally increase the use of existing parks and recreational facilities such that physical deterioration of the facility could be accelerated, resulting in a potentially significant impact.

Mitigation Measure 4.12-1 specified in **Section 4.12.6** would ensure that the Modified Project complies with the City's parkland ordinance (RMC § 15.04.708.030) by providing sufficient parkland or paying the City's in lieu fee to meet the City's parkland goals for its residents. This mitigation would ensure impacts to existing neighborhood and regional parks are less than significant. No new or expanded off-site recreational facilities would be required; therefore, no off-site environmental impacts would occur.

IMPACT 4.12.4	RESULT IN SUBSTANTIAL ADVERSE PHYSICAL IMPACTS ASSOCIATED WITH THE PROVISION OF NEW OR PHYSICALLY ALTERED GOVERNMENTAL FACILITIES, NEED FOR NEW OR PHYSICALLY ALTERED GOVERNMENTAL FACILITIES, THE CONSTRUCTION OF WHICH COULD CAUSE SIGNIFICANT ENVIRONMENTAL IMPACTS, IN ORDER TO MAINTAIN ACCEPTABLE SERVICE RATIOS, RESPONSE TIMES, OR OTHER PERFORMANCE OBJECTIVES FOR OTHER PUBLIC SERVICES
Significance Before Mitigation	Less Than Significant
Mitigation Measures	None Required
Significance After Mitigation	None Applicable
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

The increase in population generated by the Modified Project could incrementally increase the demand for other public services, such as community centers and libraries, but would not require the construction of such facilities. This could be a potentially significant impact if the residents generated from the Modified Project extensively use these other public services. However, as discussed in **Section 4.12.2**, the City has in place in its RMC public facility (e.g., libraries) use and impact fees for new developments. These

fees would be determined by the City Council and payable to the City upon issuance of the building permit or completion of the Modified Project depending on the development type. Development of the Modified Project would fully adhere and pay the fees determined by the City Council. This would fully mitigate the potential impacts from the increased use of other public services due to the increase in the City population from the new residents generated from implementation of the Modified Project. This impact would be less than significant.

4.12.5.5 Cumulative Impacts

IMPACT 4.12.5	CUMULATIVE PUBLIC SERVICE IMPACTS
Significance Before Mitigation	Potentially Significant
Mitigation Measures	Modified Project Mitigation: MM 4.12-1
Significance After Mitigation	Less Than Significant
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

Fire protection and police protection facilities for the identified cumulative projects are identified in **Section 5.3.2**. The majority of these projects are residential and commercial developments with some City developments and a few industrial developments. These cumulative projects would receive services primarily by the City of Richmond Fire Department and the City of Richmond Police Department facilities and surrounding fire protection jurisdictions. As discussed in the environmental setting section, there is an existing significant cumulative impact related to police protection but not fire protection.

The Modified Project is anticipated to generate a need for additional fire protection and police services. As explained in **Impact 4.12.1**, the Modified Project would construct a fire station/police substation to allow fire service times to be met. The construction of this facility could make a cumulatively considerable contribution to significant cumulative impacts on the environment, as discussed in detail in other sections of this SEIR. The mitigation measures imposed on the Modified Project to reduce cumulative impacts to the extent feasible also would apply to the fire station/police substation.

Other cumulative projects would similarly increase the need for fire and police protection facilities to maintain service time and staffing goals. All of these projects would result in new tax revenues and pay development impact fees associated with the provision of fire and police services that can be used to construct those new facilities, which would be subject to analysis under CEQA. Therefore, the Modified Project, in combination with past, present, and other reasonably foreseeable development in the area, would not make a cumulatively considerable contribution to significant impacts related to police services and would not create a significant cumulative impact related to fire services.

As can be seen in **Table 4.12-4**, future student enrollment numbers in 2028 (currently the furthest projected enrollment year for WCCUSD) for WCCUSD could decrease by approximately 575 students or

increase by approximately 1,883 students. As described above, the Modified Project could have an impact on elementary school master planning capacity and elementary school enrollment in WCCUSD could increase by more than 1,000 students. However, the Modified Project would be required to pay school impact fees established as a result of SB 50 to offset potential impacts from new development on school facilities. Other cumulative projects in the area with residential development and commercial and industrial development would be subject to the fees imposed pursuant to SB 50. Therefore, the Modified Project, in combination with past, present, and other reasonably foreseeable development in the area, would not make a cumulatively considerable contribution to significant cumulative impacts to schools.

As discussed in **Impact 4.12.3**, with the implementation of **Mitigation Measure 4.12-1**, the Modified Project would not have a significant impact on the City's existing parkland. The Modified Project would result in a long-term recreational benefit for the City by providing desirable recreational facilities and increasing the total quantity of open space/parkland areas. The City requires that private developers proposing residential subdivisions within the City either dedicate land for park facilities or pay a fee in lieu of providing parkland. The dedication of land or the payment of in lieu fees, or combination of the two, would ensure that impacts related to the deterioration of existing parks and recreation facilities would not occur. Therefore, the Modified Project, in combination with past, present, and other reasonably foreseeable development in the area, would not create a significant cumulative impact to parks and recreational facilities.

As discussed in **Impact 4.12.4**, the Modified Project would not result in the need to construct libraries or community centers. The Modified Project would pay the City's community/aquatic centers fee and library fee, which would mitigate its contribution to potentially significant cumulative impacts on libraries and community centers.

4.12.6 MITIGATION MEASURES

This section includes mitigation measures that reduce environmental impacts of the Modified Project. Mitigation measures that were identified in the 2011 FEIR have been presented in this Draft SEIR as appropriate; however, review of the mitigation measures identified in the 2011 FEIR determined that some measures required revisions or were not applicable to the Modified Project; however, new and more relevant mitigation measures are identified below. **Appendix K** provides a summary of whether each mitigation measure from the 2011 FEIR was revised, deleted, or kept as is and the reasoning for that determination.

MM 4.12-1 Creation of Parkland within the Project Site: The Modified Project shall comply with the City's Quimby Act ordinance by developing sufficient parkland to provide at least 3.0 acres of parkland on the Project Site per 1,000 residents generated by the Modified Project or paying the City's in lieu fee, or a combination of the two methods.

4.13 TRANSPORTATION

4.13.1 INTRODUCTION

This section provides a description of transportation conditions in the area of the Point Molate Mixed-Use Development Project (Modified Project) and describes the changes to those conditions that would result from implementation of the Modified Project. Following an overview of the relevant regulatory setting in **Section 4.13.2** and the current transportation and circulation conditions in **Section 4.13.3**, Modified Project-related impacts and mitigation measures are presented in **Section 4.13.5** and **Section 4.13.6**, respectively. Impacts to transportation associated with the Casino Project and analyzed as Alternative A in the *Final Environmental Impact Report for the Point Molate Mixed-Use Tribal Destination Resort and Casino* (2011 FEIR) are also summarized in **Section 4.13.4** and compared to the impacts of the Modified Project.

4.13.2 REGULATORY SETTING

4.13.2.1 State

California Department of Transportation

The California Department of Transportation (Caltrans) manages interregional transportation, including the management and construction of the California highway system. In addition, Caltrans is responsible for the permitting and regulation of state roadways.

California Senate Bill 743

On September 27, 2013, California Governor Jerry Brown signed Senate Bill (SB) 743 into law. SB 743 required changes to the California Environmental Quality Act (CEQA) Guidelines regarding the analysis of transportation impacts. Prior to Senate Bill 743, CEQA treated auto delay and congestion as an environmental impact. Generally, that impact is measured using level of service (LOS). Instead, SB 743 required the Governor's Office of Planning and Research (OPR) to provide an alternative to LOS, particularly within areas served by transit, that would promote the reduction of greenhouse gas (GHG) emissions, the development of multimodal transportation networks, and a diversity of land uses. SB 743 stated that measurements of transportation impacts could include vehicle miles traveled (VMT), VMT per capita, automobile trip generation rates, or automobile trips generated. Once the CEQA Guidelines were amended to include those alternative criteria, auto delay would no longer be considered a significant impact under CEQA. SB 743 also amended congestion management law to allow cities and counties to opt out of LOS standards within certain infill areas. In December 2018, the California Natural Resources Agency certified and adopted an update to the CEQA Guidelines that included the Guidelines section implementing SB 743. Along with the updated guidelines, OPR published the *Technical Advisory on Evaluating Transportation Impacts in CEQA*, which contains technical recommendations from OPR for assessment of VMT, thresholds of significance, and mitigation measures (OPR, 2018). While the newly adopted CEQA Guidelines require the immediate use of VMT analysis in areas designated as transportation priority areas (TPA), jurisdictions have until July 1, 2020, to use VMT to analyze traffic impacts outside of TPAs. The Point Molate Site (Project Site) is not within a TPA.

4.13.2.2 Local

Contra Costa Transportation Authority and West Contra Costa Transportation Advisory Committee

The Contra Costa Transportation Authority (CCTA) is the Contra Costa County (County) agency established to implement Measure C, passed by voters in 1998, and its extension, Measure J, passed in 2004. These measures increased sales tax by one-half percent to fund a list of specific transportation improvement projects in the County. Measure C also required the development of a Growth Management Program to help control the spread of congestion.

CCTA serves as the Congestion Management Agency (CMA) for the County, and is required to prepare a Congestion Management Program (CMP) that outlines strategies for managing the performance of the regional transportation within the County. The most recent CMP was adopted by CCTA in 2017. The CMP requires an analysis of any project that is expected to generate more than 100 peak hour vehicle trips.

The CCTA includes several Regional Transportation Planning Committees that cover specific sub-areas of the County. The City is under the purview of the West Contra Costa Transportation Advisory Committee (WCCTAC). The WCCTAC regularly updates the West Contra Costa Action Plan (West County Action Plan) for Routes of Regional Significance. The West County Action Plan assesses transportation issues within the western portion of the County and outlines a recommended package of goals, objectives, and actions for addressing those issues. The most recent West County Action Plan was adopted in September 2017.

Countywide Comprehensive Transportation Plan

The 2017 Countywide Comprehensive Transportation Plan established the following goals for the County transportation system.

1. Support the efficient, safe, and reliable movement of people and goods using all available travel modes.
2. Manage growth to sustain the economy of the County, preserve its environment, and support its communities.
3. Expand safe, convenient, and affordable alternatives to the single-occupant vehicle.
4. Maintain the transportation system.
5. Continue to invest wisely to maximize the benefits of available funding.

City of Richmond General Plan 2030 Circulation and Growth Management Elements

The Circulation and Growth Management Elements of the City's General Plan 2030 (General Plan), adopted in 2012, establishes policies and standards for traffic LOS. The LOS standards are defined in **Section 4.13.5**. Applicable goals and policies are as follows.

GOAL CR1 **An Expanded Multimodal Circulation System.** Make conditions safer and more attractive for all modes of transportation including travel by foot and bicycle, public transit, and automobiles. Evaluate streets and potential enhancements based on surrounding land use, street function, and desired character and by relying on the

place-based approach to circulation planning articulated in the General Plan. Take potential improvement measures ranging from physical design treatment of the street environment to social and programmatic responses appropriate to the particular street context.

- Policy CR1.1** **Balanced Modes of Travel and Equitable Access.** Encourage multiple circulation options in the City and work with transit operators to ensure equitable access for all members of the community.
- Policy CR1.2** **An Interconnected Street System.** Promote an interconnected system of streets that adequately serves current and future travel needs.
- Policy CR1.3** **Local and Regional Transportation Linkages.** Enhance circulation linkages within the City and region.
- Policy CR1.4** **Expanded and Affordable Public Transit.** Coordinate with regional transportation agencies and support enhanced and expanded public transit to improve mobility options for residents and visitors.
- Policy CR1.5** **Safe and Convenient Walking and Bicycling.** Promote walking and bicycling as a safe and convenient mode of transportation.
- Policy CR1.6** **Comprehensive Network of Multi-Use Trails.** Develop a comprehensive network of multi-use trails including to enhance bicycle and pedestrian connectivity throughout the City and the region.
- Policy CR1.10** **Vehicular Level of Service Standards for West County Routes of Regional Significance.** Maintain vehicular LOS standards for signalized intersections consistent with the CCTA West County Action Plan for Routes of Regional Significance.
- GOAL CR2** **Walkable Neighborhoods and Complete Streets.** Activate the public right-of-way and improve the experience of moving people between key destinations at the pedestrian level. In order to make walking and bicycling more attractive options, enhance connectivity between neighborhoods, schools, the workplace, and daily goods and services so that reaching key destinations is safer and more convenient. Contribute to walkability and livability by promoting mixed-use and complete streets, high-quality pedestrian environments, context-based street design, and efficient public transit.
- Policy CR2.2** **Complete Streets.** Promote mixed-use urban streets that balance public transit, walking, and bicycling with other modes of travel.
- Policy CR2.3** **Integrated Bicycle and Pedestrian System.** Plan, construct, and maintain a safe, comprehensive, and integrated bicycle and pedestrian system.

- GOAL CR3** **A safe and well-maintained Circulation System.** In order to create a safe and efficient circulation system, emphasize ongoing street maintenance and safety improvements that consider all modes of transportation including walking, bicycling, and public transit. Require new facilities and infrastructure as development occurs in order to meet the needs of all users while enhancing mobility and connectivity.
- Policy CR3.1** **Safety and Accessibility.** Enhance safety and accessibility for pedestrians, bicyclists, and transit riders.
- Policy CR3.3** **Concurrent Infrastructure Development.** Require concurrent infrastructure development for new and redevelopment projects that may have a significant impact on the existing circulation system including streets, trails, sidewalks, bicycle paths, and public transit.
- GOAL CR5** **Sustainable and Green Practices.** In order to create sustainable and clean circulation options, encourage the use of low-impact alternative fuels and new technologies and implement transportation demand management programs. Encourage measures to treat and retain stormwater in the design of pedestrian and parking amenities.
- Policy CR5.1** **Transportation Demand Management.** Promote TDM strategies among residents and businesses to reduce reliance on automobiles. Encouraging major employers to develop and implement TDM for employees will address peak commute traffic, congestion, and air quality. Encourage and support development and transportation projects that emphasize design elements for bicycle and pedestrian access.
- Policy CR5.2** **Renewable Energy and Clean Technology.** Promote the use of renewable energy, including non-fossil fuels, and clean technology for transportation including public transit and goods movement.
- Policy CR5.3** **Green Streets.** Promote the development of street design elements that incorporate natural stormwater drainage and landscaping in new and retrofitted streets.
- GOAL GM1** **Coordinated Land Use and Transportation Planning.** Promote mixed-use, high-density infill development and investment around transit hubs and along transit corridors to maximize the efficient use of available land and infrastructure in the City and the region. Coordinate with neighboring cities, the County, and regional transportation agencies to manage growth and minimize regional impacts.
- Policy GM1.1** **Pedestrian and Transit-Oriented Urban Environment.** Promote walkability and public transit by encouraging mixed-use, higher-density development close to community amenities.

GOAL GM2 **Improved Infrastructure and Facilities.** Improve public services and infrastructure to meet the demands of new development.

Policy GM2.2 **Community Amenities for New Development.** Require new development to pay costs attributable to that development including impacts on: local streets; local and regional transportation systems; and public facilities such as parks and recreation, schools, and emergency services.

City of Richmond Municipal Code Section 12.29.040

Section 12.29.040 of the Richmond Municipal Code (RMC) requires project applicants to submit a Traffic Control Plan prior to issuance of encroachment and street cut permits. A Traffic Control Plan is typically required for any construction performed within the public right-of-way or that has the potential to significantly affect traffic operations and the use of the public right-of-way during construction within such right-of-ways. A Traffic Control Plan is intended to ensure safe and efficient traffic operations during construction. The City *Encroachment Permit Conditions* (City of Richmond, 2019h) provides the following guidance for preparing a Traffic Control Plan.

- Traffic and pedestrian access control must be in place prior to start of work. No traffic cones are to be left overnight. Barricades with flashers are to be used. The Traffic Control Plan shall be in accordance with latest California Manual of Uniform Traffic Control Devices, and the Pedestrian Access Plan shall be in accordance with the latest Americans with Disabilities Act (ADA) requirements.
- Traffic shall be permitted to pass through the work area at all times. Complete street closures must be approved by the City Department Head/Engineer.
- Driveways (business, apartments, homes, side streets) must not be closed but are to have access at all times.

City of Richmond Municipal Code Section 15.04.612 (Transportation Demand Management)

The purpose of RMC § 15.04.612 is to promote maximum efficiency in the existing transportation system, and to further the transportation goals of the Measure C and Measure J Growth Management Program, Contra Costa's Countywide Transportation Plan and CMP, and the San Francisco Bay Area Clean Air Plan, including reducing total VMT while enhancing access and expanding mobility. The requirements of RMC § 15.04.612 apply to:

- new multi-unit development of ten units or more,
- new non-residential development of 10,000 square feet (sq. ft.) or more, and
- establishment of a new use, change of use, or change in operational characteristics in a building that is 10,000 sq. ft. or more in size that results in an average daily trip increase of more than 10 percent of the current use, based on the most recent Institute of Transportation Engineers (ITE) trip generation rates.

All projects subject to the requirements of RMC § 15.04.612 must incorporate measures to reduce, to the extent feasible, single-occupant vehicle trip generation rates 15 percent below the standard rates as

established in the most recent edition of the ITE Trip Generation Manual by promoting walking, cycling, public transit, and ridesharing/vanpooling, and/or discouraging single-occupant vehicle travel, and ensure that the average VMT by residents or workers in the development, or students or workers in schools, is less than the average City-wide VMT. Alternatively, residential developments can obtain GreenTRIP Certification from TransForm, or other equivalent certification, prior to issuance of a certificate of occupancy.

All projects subject to the requirements of RMC § 15.04.612 that do not have GreenTRIP Certification must implement any combination of the following measures to achieve the required VMT reduction and promote use of non-auto and shared mobility options.

- A. **Passenger Loading Zones.** Passenger loading zones for carpool and vanpool drop-off located near the main building entrance.
- B. **Direct Route to Transit.** A well-lighted path or sidewalk utilizing the most direct route to the nearest transit or shuttle stop from the building.
- C. **Pedestrian Connections.** Safe, convenient pedestrian connections provided from the project to surrounding public streets and, if applicable, trails.
- D. **Bicycle Connections.** If a site is abutting a bicycle path, lane, or route, provision of a bicycle connection close to an entrance to the building on the site.
- E. **Land Dedication for Transit/Bus Shelter.** Where appropriate, land dedicated for transit or a bus shelter provided based on the proximity to a transit route.
- F. **Long-Term Bicycle Parking.** Covered and secure long-term bicycle parking located within 75 feet of a main entrance. Long-term bicycle parking must be in at least one of the following facilities: 1. An enclosed bicycle locker; 2. A fenced, covered, locked, or guarded bicycle storage area; or 3. A rack or stand inside a building that is within view of an attendant or security guard or visible from employee work areas.
- G. **Short-Term Bicycle Parking.** Secure short-term bicycle parking located within 50 feet of a main entrance to the building.
- H. **Free Preferential Carpool and Vanpool Parking.** Ten percent of vehicle spaces reserved for carpools or vanpools, with a minimum of one space required. The preferential parking spaces shall be provided free of charge.
- I. **Showers/Clothes Lockers.** Shower and clothes locker facilities free of charge.
- J. **Transportation Management Association (TMA).** Participation in or requirement for tenant to participate in a local or City-wide TMA or a similar organization approved by the Director of the Department of Transportation, that provides ongoing administration of and support for non-auto and shared mobility commute incentives, facilities, and services.
- K. **Paid Parking at Prevalent Market Rates.** Parking provided at a cost equal to the prevalent market rate, as determined by the City based on a survey of paid parking in the City and adjacent communities.
- L. **Alternative Commute Subsidies/Parking Cash Out.** Provide employees with a subsidy, determined by the Applicant and subject to review by the Department of Transportation, if they use transit or commute by other alternative modes.
- M. **Carpool and Vanpool Ride-Matching Services.** Matching of potential carpoolers and vanpoolers by administering a carpool/vanpool matching program, or participating actively in such a program administered by a local or City-wide TMA, the City, or other public agency.

- N. **Guaranteed Ride Home.** Guaranteed rides home in emergency situations for carpool, vanpool, and transit riders. Rides shall be provided either by a transportation service provider (taxi, rental car, or services provided by transportation network/ride sharing companies) or an informal policy using company vehicles with designated employee drivers.
- O. **Shuttle Program.** Provision of a shuttle program or participation in an existing shuttle program approved by the Department of Transportation and subject to any fees for the existing program.
- P. **Information Boards/Kiosks.** Display of the following information in a prominent location, maintained by a designated TDM contact: transit routes and schedules; carpooling and vanpooling information; bicycle lanes, routes, and paths and facility information; and alternative commute subsidy information.
- Q. **Promotional Programs.** Promotion and organization of events for the following programs: new tenant and employee orientation packets on transportation alternatives; flyers, posters, brochures, and emails on commute alternatives; Spare the Air (June through October); Rideshare Week (October); and trip planning assistance routes and maps.
- R. **Compressed Work Week.** Allow employees or require tenants to allow employees to adjust their work schedule in order to complete the basic work requirement of five, eight-hour workdays by adjusting their schedule to reduce the number of days per week employees are expected or required to be onsite, thereby reducing the number of vehicle trips to the worksite.
- S. **Flextime.** Provide or require tenants to provide employees with staggered work hours involving a shift in the set work hours of all employees at the workplace or flexible work hours involving individually determined work hours, such that a substantial share of employees regularly arrive at and depart from the worksite before or after the AM and PM peak periods for vehicle travel.
- T. **Onsite Amenities.** One or more of the following amenities provided onsite: day care, cafeteria, limited food service establishment, dry cleaners, exercise facilities, convenience retail, post office, or on-site transit pass sales.
- U. **Telecommuting.** Provide or require tenants to provide opportunities and the ability for employees to work offsite.
- V. **Other Measures.** Additional measures not listed in this Article, such as child care facilities or an in-lieu TDM fee established by the City Council to provide funding for multi-modal access facilities and services, and/or transportation and parking demand management programs.

Richmond Bicycle Master Plan

Consistent with the vision presented in the General Plan, the City of Richmond Bicycle Master Plan (City of Richmond, 2011b) provides detailed action items to complete a bikeway system and supporting facilities in the City. The Richmond Bicycle Master Plan contains the four goals and objectives below.

- **Goal 1:** Expand bicycle routes and parking facilities in the City into an extensive, well-connected, and well-designed network, and improve and maintain these facilities over time.
Objective: Increase the number of bikeway miles by 75 percent, complete all gaps in the Bay Trail, and double the number of bicycle parking spaces.
- **Goal 2:** Increase the number of people of all ages and backgrounds who bicycle for transportation, recreation, and health.
Objective: Double the number of trips made by bicycle.

- **Goal 3:** Make the streets safer for bicyclists, during the day and night.
Objective: Reduce the number of bicycle fatalities and injuries by 25 percent (even as the number of bicyclists increases).
- **Goal 4:** Incorporate the needs and concerns of cyclists in all transportation and development projects.
Objective: Adopt, institutionalize, and have relevant City departments implement a “Complete Streets” policy and bicycle-friendly design standards and guidelines for streets and developments.

Richmond Pedestrian Plan

Consistent with the vision presented in the General Plan, the City of Richmond Pedestrian Plan (City of Richmond, 2011c) aims to improve the safety, convenience, and appeal of walking throughout the City. The Richmond Pedestrian Plan contains the goals below.

- **Increased Safety.** Streets will be developed and retrofitted to accommodate all types of users. Designs and devices will produce speed moderation, visibility, awareness, and communication for motorists and non-motorists alike.
- **Improved Security.** Streets, trails, and other public spaces will be designed and improved to create active places that are watched over, maintained, and that project a sense of control and community ownership.
- **Improved Connectivity.** A range of strategies and solutions will address physical barriers to walking, such as dead-end streets, railroad right-of-ways, wide roadways, and wide, complex intersections.
- **Increased Equity.** Walking, the cheapest form of transportation, will be a safe, viable, and convenient choice for those who cannot afford, are unable, or choose not to drive a car.
- **Improved Health.** Walking and bicycling, the healthiest forms of transportation, will become desirable alternatives for trips to daily destinations.
- **Increased Sustainability.** Walking and bicycling in the City will reduce the number of vehicle miles Richmond [City] residents and visitors travel, and will reduce associated climate change, air, and water quality impacts from vehicle emissions. Opportunities will be identified to convert excess paved rights-of-way to lower impact spaces with trees and landscaping.
- **Neighborhood and Downtown Revitalization.** Improvements to the streets and pedestrian realm will beautify the public realm and set the stage for new investment in private property that can help fund improvements and attract development that supports walking, bicycling, and the use of transit.

San Francisco Bay Plan

The Bay Conservation and Development Commission [BCDC] is the agency responsible for maintaining and carrying out the provisions of the San Francisco Bay Plan (Bay Plan). The Bay Plan contains information that describes the values associated with the San Francisco Bay (Bay) and policies regarding future uses of the Bay and shoreline, including transportation related policies. The Modified Project will

involve building or improving existing transportation routes, including roads, walkways, and bicycle paths. The following policies of the Bay Plan are relevant for the Modified Project.

- **Policy 10:** Access to and along the waterfront should be provided by walkways, trails, or other appropriate means and connect to the nearest public thoroughfare where convenient parking or public transportation may be available. Diverse and interesting public access experiences should be provided which would encourage users to remain in the designated access areas to avoid or minimize potential adverse effects on wildlife and their habitat.
- **Policy 13:** The Public Access Design Guidelines should be used as a guide to siting and designing public access consistent with a proposed project. The Design Review Board should advise the Commission [BCDC] regarding the adequacy of the public access proposed.

4.13.3 ENVIRONMENTAL SETTING

Information provided in this section is derived from a number of sources including based on the Transportation Impact Analysis (TIA) presented in **Appendix D** and published information regarding transportation in the vicinity of the Project Site. This analysis focuses on the manner in which development could alter the Project Site under Existing and Cumulative (2040) Conditions defined in **Section 4.13.5**.

4.13.3.1 Existing Circulation Network

The routes to and from the Project Site are described below. **Figure 4.13-1** shows the Modified Project study area and study intersections locations.

Routes of Regional Significance

Routes of Regional Significance (s) are major roadway and freeway corridors that serve regional traffic. These are identified in Action Plans adopted by the CCTA under the Countywide Measure J program. Interstate 580 (I-580), the Richmond Parkway, San Pablo Avenue, and 23rd Street are all identified as RRS in the West County Action Plan. The following is a detailed description of some of the main roadways that could be affected by the Modified Project.

- **I-580:** I-580 is a six-lane (three lanes in each direction) freeway within the vicinity of the Project Site. I-580 begins in San Joaquin County at a junction with Interstate 5, passes through cities in the Bay Area including Livermore, Pleasanton, Oakland, Berkeley, and Richmond, ending at a junction with U.S. Highway (US 101) in Marin County. I-580 crosses the Richmond-San Rafael Bridge just west of Western Drive at the bridge toll plaza. Access to the Project Site westbound, is via a one-lane off-ramp at Western Drive. There is no current direct access for vehicles traveling eastbound on I-580 from Marin and Sonoma counties. Vehicles traveling eastbound (EB) on I-580 must take a circuitous route past the Project Site, exiting the freeway to then circle back onto I-580 westbound back to the Western Drive off-ramp.
- **Richmond-San Rafael Bridge:** The Richmond-San Rafael Bridge is a 5.5-mile-long cantilever and truss bridge (total length including approaches) spanning the southern end of the San Pablo Bay connecting the cities of Richmond and San Rafael via I-580. There are two

westbound upper level lanes and two EB lower level lanes, except between 2 p.m. and 7 p.m. when the shoulder lane is allowed to be used as a third EB lane. (A pilot project has created a two-way bicycle path in the shoulder lane on the upper deck of the bridge.)

- **Richmond Parkway:** The Richmond Parkway is a four-lane divided expressway running parallel to Interstate 80 (I-80) in the City. The Richmond Parkway runs in a north/south direction near I-580 and runs east/west near I-80. The Richmond Parkway provides access to the industrial areas of the City and also serves as a bypass by carrying traffic between I-80 in the northern portion of the City to I-580 just east of the Western Drive exit. The Richmond Parkway extends from the I-580 EB off-ramp, merges with traffic on Castro Street, crosses under I-580, and leads north. To the south of I-580, the roadway is designated as Castro Street and provides access to Point Richmond.
- **San Pablo Avenue:** San Pablo Avenue is a four-lane regional arterial that provides parallel access to I-80 from the Town of Crockett near the Carquinez Strait, through Hercules, Pinole, San Pablo, Richmond, El Cerrito, Berkeley, and then terminating to the south in downtown Oakland.
- **23rd Street:** 23rd Street is a major north/south route that traverses through central Richmond and San Pablo. Marina Bay Parkway becomes 23rd Street to the north of Cutting Boulevard. 23rd Street then merges with San Pablo Avenue north of the City. In downtown Richmond, 23rd Street becomes a one-way street parallel with 22nd Street, serving as a one-way north/south pair.
- **Stenmark Drive:** Stenmark Drive is the only road that provides direct access to the San Pablo Peninsula and the Project Site. Stenmark Drive is currently a two-lane roadway which varies from approximately 20 to 36 feet in width. There are no shoulders, curbs, gutters, sidewalks, or bicycle lanes on Stenmark Drive. The road does not currently meet City design standards. Five years of California Highway Patrol accident records were evaluated for Stenmark Drive to verify there were no existing safety problems. This data is included in the technical appendix of **Appendix D**.

Study Intersections

Based on the Modified Project's trip generation and the potential for traffic impacts, a list of study intersections was prepared including all signalized intersections where more than 50 peak hour trips would be added, as per CCTA Technical Procedures (CCTA, 2013). Intersections are the critical locations for increased traffic congestion and poor operations. The current LOS operations of the study intersections are provided in **Section 4.13.5** below. The following 30 intersections, presented in **Figure 4.13-1**, are included in the analysis.

1. Castro Street and I-580 Westbound (WB) Off-Ramps/Chevron®
2. Marine Street and I-580 EB Ramps
3. Canal Boulevard and I-580 WB Ramps
4. Canal Boulevard and I-580 EB Ramps
5. I-580 WB Ramps and Cutting Boulevard
6. I-580 EB Off-Ramp/Hoffman Boulevard and Cutting Boulevard
7. Harbour Way South and I-580 WB Off-Ramp
8. Harbour Way South and Cutting Boulevard

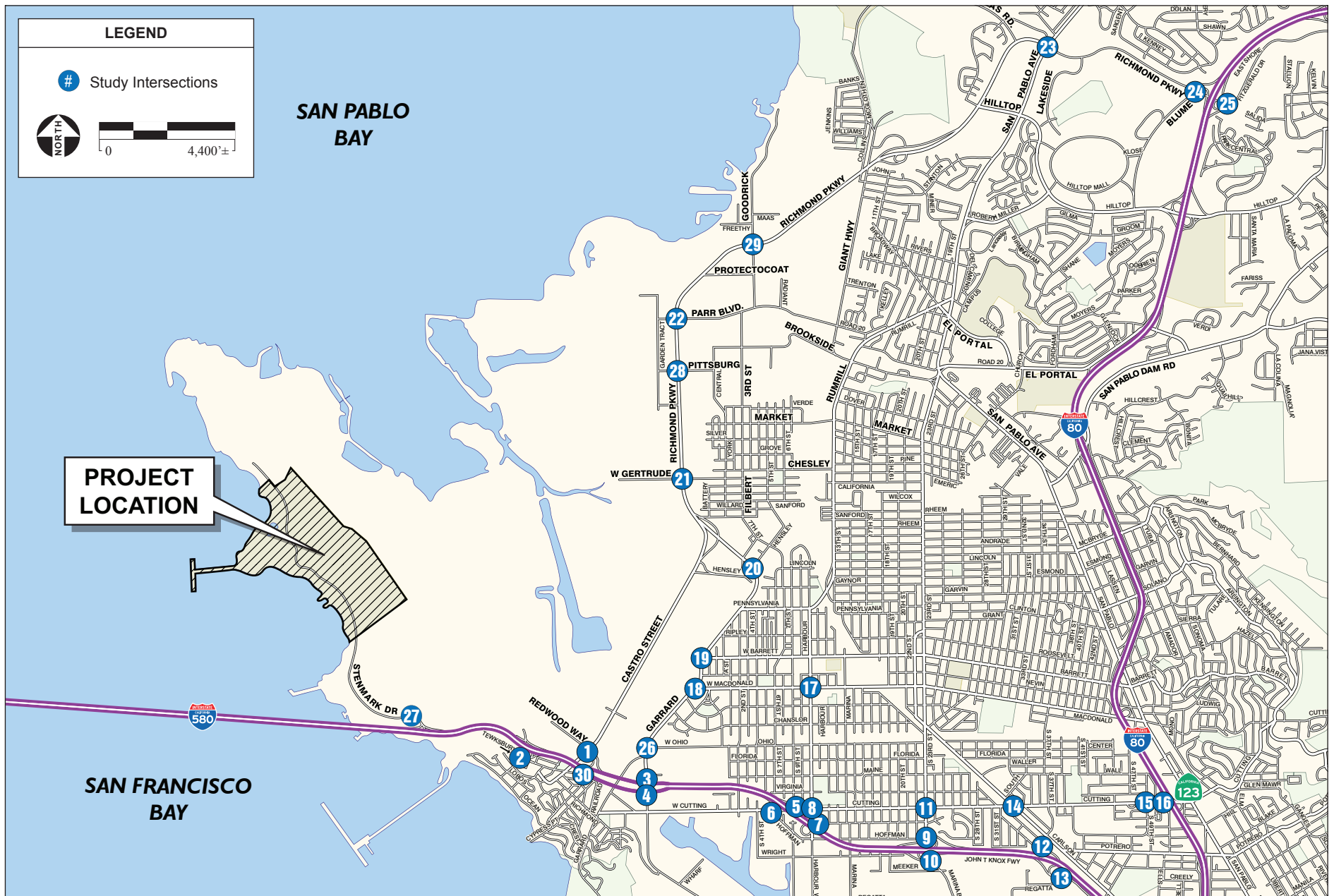


Figure 4.13-1
Transportation Study Area and Intersections

9. Marina Bay Parkway and I-580 WB Ramps
10. Marina Bay Parkway and I-580 EB Ramps
11. Marina Bay Parkway and Cutting Boulevard
12. I-580 WB Ramps and Juliga Woods Street
13. Regatta Boulevard and I-580 EB Off-Ramp
14. Carlson Boulevard and Cutting Boulevard
15. South 49th Street and Cutting Boulevard
16. I-80 WB Off-Ramp and Cutting Boulevard
17. Harbour Way and Macdonald Avenue
18. Richmond Parkway and Macdonald Avenue
19. Richmond Parkway and Barrett Avenue
20. Richmond Parkway and Hensley Street
21. Richmond Parkway and West Gertrude Avenue
22. Richmond Parkway and Parr Boulevard
23. Richmond Parkway and San Pablo Avenue
24. Blume Drive/I-80 WB Ramps and Richmond Parkway
25. Richmond Parkway and I-80 Northbound (NB)/EB Ramps
26. Canal Boulevard and South Garrard Boulevard
27. Stenmark Drive and Dutra Materials
28. Richmond Parkway and Pittsburg Avenue
29. Richmond Parkway and Goodrick Avenue
30. Castro Street and East Standard Avenue

The traffic control and intersection lane configurations are presented in **Appendix D**.

4.13.3.2 Bicycle and Pedestrian Facilities

There are currently no bicycle or pedestrian facilities within the Project Site or along Stenmark Drive. The nearest bicycle/pedestrian facility is a Class I bike path that begins northwest of the I-580/Stenmark Drive interchange and then traverses southwest. This bicycle/pedestrian path is part of the San Francisco Bay Trail (Bay Trail), which is proposed to ring the Bay with a combination of bicycle and pedestrian trails. An extension to the Bay Trail from Point Richmond to connect with the planned bicycle path across the upper deck of the Richmond-San Rafael Bridge has been constructed. As described in **Section 3.4.3.3**, expansion of the Bay Trail to and within the Project Site was approved by the City in 2018. The Modified Project would construct the portion of Bay Trail that runs through the Project Site.

4.13.3.3 Transit

No direct transit service is currently provided to the Project Site. Three types (bus, rail, and ferry) of public mass transit provide service near the Project Site. The existing transit services in the vicinity of the Project Site are described below.

Bus Services

AC Transit serves the western portion of the County including the City and its surrounding unincorporated areas. AC Transit is the primary bus service provider in 13 cities and adjacent unincorporated areas in Alameda and Contra Costa counties, with Transbay service to destinations in San Francisco, San Mateo, and Santa Clara counties. No direct bus service is currently provided to the San Pablo Peninsula, though both Golden Gate Transit and AC Transit provide service on routes within the general vicinity of Point Molate. The nearest AC Transit bus route is Route 72 which operates between Point Richmond and the Richmond Bay Area Rapid Transit (BART) station from approximately 5:00 a.m. to 11:00 p.m. on 15-minute headways. However, the nearest public bus stops for this line are currently in Point Richmond, which is over two miles from the Project Site (**Appendix D**).

Golden Gate Transit operates bus service within and between Marin, San Francisco, Sonoma, and Contra Costa counties. Golden Gate Transit buses operate service from the BART rail stations at El Cerrito Del Norte and Richmond to the vicinity of the Project Site at Tewksbury Avenue and Castro Street (Golden Gate Bridge, Highway, and Transportation District, 2019).

Rail Services

BART is a rapid mass transit system that provides regional transportation connections to much of the Bay Area. It runs from the north East Bay in the City to the south East Bay in Fremont. In the east/west direction it runs from Walnut Creek and Pittsburg to the San Francisco Airport and Millbrae. Both the north-south East Bay line and the east-west East Bay to San Francisco line have several connections in Oakland, where transfer stations between the lines are located. The Richmond BART station, which is closest to the Project Site, serves the City and other surrounding cities and has trains that run from approximately 6:00 a.m. to 12:00 a.m. daily, with a weekday, peak-hour frequency of approximately 7 to 8 minutes (**Appendix D**).

Amtrak provides inter-city rail service throughout California and the country. The Richmond Station is located adjacent to the Richmond BART Station. The Richmond Station is also served by the Capitol Corridor line, which operates weekday commute service between San Jose and Sacramento (**Appendix D**).

Ferry Services

Ferry service in San Pablo and San Francisco bays are provided by both public and private entities, located in the cities of Vallejo, Oakland, Alameda (two terminals), Larkspur, Tiburon, Sausalito, and San Francisco (two terminals) (San Francisco Bay Area Water Emergency Transportation Authority [SFBAWETA], 2016). The SFBAWETA is tasked with expanding existing ferry services in the Bay Area.

On January 10, 2019, a new ferry route was opened between the San Francisco Ferry Terminal and the newly constructed ferry terminal in the City. The Richmond Ferry Terminal is approximately 1.5 miles south of the City's downtown core, and connects Richmond passengers to San Francisco in approximately 30 minutes. The ferry transports around 10,000 commuters daily to relieve commuters from traveling across the Bay Bridge. The four morning and two afternoon ferries depart to San Francisco every weekday with two morning and four afternoon ferries returning back to the Richmond Ferry

Terminal. Summer weekend ferry service between Richmond and San Francisco launched on Saturday, August 3, 2019. The trial service ran on weekends throughout the months of August, September, and October and the first weekend of November. Currently, there is no weekend ferry service.

4.13.4 2011 FEIR ANALYSIS

This section provides a summary of the impacts to transportation conditions analyzed for the Casino Project in the 2011 FEIR, followed by a description of any changes since the 2011 FEIR that relate to transportation.

4.13.4.1 2011 FEIR Summary of Impacts

Impacts

Construction traffic under the Casino Project was determined to have the potential to increase the existing traffic load of intersections within the study area. This was considered a potentially significant impact. However, with implementation of mitigation measures, impacts from construction-related traffic on existing intersections would be reduced. Mitigation measures included development of a Soil Disposal Plan and a Construction Coordination Plan to reduce impacts from construction traffic. The 2011 FEIR determined this impact would have been less than significant.

Operational traffic under the Casino Project was determined to have the potential to increase the existing traffic load of intersections within the study area. This was considered a potentially significant impact. However, even with the addition of project-related traffic, all of the study intersections were projected to operate at an acceptable LOS or the project contributed less than one percent of traffic volume (a CCTA CMP threshold) at previously impacted intersections (in the background condition), with the exception of the following.

- Richmond Parkway/Blume Drive/WB I-80 On and Off Ramps (weekday PM peak hour)
- Sir Francis Drake Boulevard and Andersen Drive (Weekday AM, PM, and Saturday peak hour)
- Sir Francis Drake Boulevard and Larkspur Landing Circle (Ferry Terminal)
- US 101 NB On and Off Ramps at Sir Francis Drake Boulevard

Mitigation measures proposed for the Richmond Parkway/Blume Drive and Sir Francis Drake/Andersen Drive intersections would have resulted in an acceptable LOS. The 2011 FEIR determined this to be a less-than-significant impact at these intersections. However, the intersections at Sir Francis Drake Boulevard and Larkspur Landing Circle (Ferry Terminal) and Sir Francis Drake Boulevard and US 101 NB On and Off Ramps would operate at LOS E and F, respectively. The 2011 FEIR determined these impacts would have been significant and unavoidable as they are outside of the jurisdiction of the City.

Construction traffic under the Casino Project was determined to have the potential to result in inadequate emergency access. This was considered a potentially significant impact. However, with implementation of mitigation measures, including development of a Soil Disposal Plan and a Construction Coordination Plan and coordination with local emergency service providers to reduce impacts to emergency access, this impact would have been reduced. The 2011 FEIR determined this impact to emergency access would have been less than significant.

Construction and operation of the Casino Project was determined not to conflict with adopted plans supporting alternative transportation. Construction of the Casino Project was found not to impede the completion of the Bay Trail or inhibit the goals of the relevant transportation plans. Operation of the Casino Project was found to aid in the completion of the Bay Trail and goals of the relevant transportation plans. This would have been a less-than-significant impact. Operation of ferry service was determined to have the potential to decrease vehicular traffic in the study area. The addition of the ferry service to the Project Site and integration of an intermodal transit hub would have had a beneficial impact on local vehicular traffic, rail, bus, and other ferry services. Implementation of Casino Project was found to have the potential to increase riders on local rail and bus services. However, given the available capacity on existing public transit facilities plus augmentation of capacity by shuttle busses and coach services, the 2011 FEIR determined this would have been a less-than-significant impact.

During the construction and operation of the Casino Project, traffic would have been provided adequate parking. Construction traffic would have been provided a designated parking staging area and operational traffic would have had access to parking structures, parking lots, and bus parking. The 2011 FEIR determined this impact would have been less than significant.

Implementation of the Casino Project would not have substantially increased hazards due to a design feature or incompatible uses along roadways in the study area. Instead, the Casino Project would have improved Stenmark Drive from I-580 through the Project Site. Therefore, the 2011 FEIR determined this would have been a less-than-significant impact.

The Casino Project was determined to have the potential to increase delays at the Richmond-San Rafael Bridge toll plaza. However, the LOS at the toll plaza was determined to be LOS E for both the AM and PM peak hours, and vehicles per hour WB through the toll plaza was 3,921 in the AM peak hour and 4,037 in the PM peak hour. Therefore, I-580 at the toll plaza would not have exceeded 4,225 vehicles per hour. Therefore, the 2011 FEIR determined this impact would have been less than significant.

Cumulative Impacts

Increased traffic volumes from the operation of Casino Project in the year 2025, in combination with other foreseeable projects, was determined to have the potential to substantially increase traffic volumes of intersections and roadway segments within the Modified Project study area. This was a potentially significant and unavoidable cumulative impact.

With the Casino Project, all of the study freeway segments were projected to operate at an acceptable LOS except for the following.

- I-80 at Richmond Parkway On-Ramp EB (PM peak hour)
- I-580 at Marine Street Off-Ramp EB (PM peak hour)
- Southbound US 101 Off-Ramp to EB I-580 (AM peak hour)
- WB I-580 On-Ramp to NB US 101 (PM peak hour)
- WB I-580 Richmond-San Rafael Bridge (AM and PM peak hours)
- EB I-580 Richmond/San Rafael Bridge (PM peak hour)

The Casino Project in the cumulative year 2025 was found to have a less-than-significant impact with the mitigation measures identified in Section 5.2.7 of the 2011 FEIR. However, the identified mitigation measures were considered infeasible due to lack of funding and/or because the improvements fell within the responsibility and jurisdiction of a public agency other than the City or County for which there was no existing plan to implement or fund. The 2011 FEIR determined this would have been a potentially significant and unavoidable cumulative impact.

With the Casino Project, all of the study intersections were projected to operate at an acceptable LOS except for the following.

- Richmond Parkway/Blume Drive/WB I-80 On/Off Ramps (weekday PM and Saturday peak hour)
- Richmond Parkway (Castro Street)/ Redwood Way/WB I-580 On/Off Ramps (weekday PM peak hour)
- Marine Street/EB I-580 On/Off-Ramps (weekday PM peak hour)
- Richmond Parkway/Gertrude Avenue (weekday AM and PM peak hour)
- Richmond Parkway/Parr Boulevard (weekday AM and PM peak hour)
- San Pablo Avenue/Appian Way/Pinole Avenue (weekday AM and PM peak hour)
- Pittsburg Avenue/Richmond Parkway (weekday PM peak hour)
- Goodrick Avenue/Richmond Parkway (weekday PM peak hour)
- Sir Francis Drake Boulevard and Larkspur Landing Circle (Ferry Terminal)
- US 101 NB On/Off-Ramps at Sir Francis Drake Boulevard

Although the San Pablo Avenue/Appian Way/Pinole Avenue intersection would have operated at a sub-standard LOS during the cumulative background conditions, it would have experienced less than one percent increase in peak hour traffic with the implementation of the Casino Project (Appendix S of the 2011 FEIR); therefore, under the significance criteria, a less-than-significant impact would occur at that intersection. A significant impact would occur at the remaining intersections noted above, but completing mitigation measures identified in Section 5.2.7 of the 2011 FEIR would have resulted in an acceptable LOS. The 2011 FEIR determine this cumulative impact would have been less than significant.

The Casino Project traffic in the year 2025 would not have resulted in inadequate emergency access in combination with traffic from other developments. Traffic would not have been congested in a manner that would have impeded emergency access along any roadway or intersection in the study area. Therefore, the 2011 FEIR determined this would have been a less-than-significant impact.

Operation of ferry service under the Casino Project, in combination with other planned increases in ferry service in the future, has the potential to decrease vehicular traffic on roadways in the study area. This is a beneficial impact because the addition of a ferry service would have reduced the number of commuters on local roadways in the year 2025. Therefore, the 2011 FEIR determined that the operation of the ferry service would have resulted in a beneficial cumulative impact.

The Casino Project in the cumulative year 2025 had the potential to increase delays at the Richmond-San Rafael Bridge toll plaza when combined with foreseeable developments. This was a potentially significant and unavoidable impact. In the cumulative year 2025 under the Casino Project, the toll plaza would operate at LOS F for both the AM and PM peak hours. The traffic impact analysis determined that the vehicles per hour WB through the toll plaza was 5,258 in the AM peak hour and 4,736 in the PM peak hour, which would have exceeded the 4,225 vehicles per hour at the toll plaza. However, mitigation

measures were provided for the toll plaza in Section 5.2.7 of the 2011 FEIR that would have resulted in an acceptable LOS. Therefore, the 2011 FEIR determined this impact would have been less than significant.

For alternatives with more adverse cumulative impacts than the Casino Project, traffic from the operation of Alternative D in the year 2025, in combination with other foreseeable projects, would have substantially increased the existing traffic volumes of roadways segments within the project area. The 2011 FEIR determined this cumulative impact would have been potentially significant and unavoidable with mitigation.

4.13.4.2 Changes Since the 2011 FEIR

In addition to the changes in the proposed project, baseline conditions have changed in the vicinity of the Project Site. Existing traffic volumes at study area intersections have increased compared to the 2011 FEIR. The following intersections no longer have an acceptable LOS (generally LOS D or better, as described below in **Section 4.13.5.2**) during weekday peak hours.

- Intersection #1 (Castro Street and the I-580 WB Off-Ramps/Chevron®)
- Intersection #24 (Blume Drive/I-80 WB Ramps and Richmond Parkway)
- Intersection #29 (Richmond Parkway and Goodrick Avenue)

In addition, various regulatory documents have changed since 2011.

The transportation significance criteria in Appendix G of the CEQA Guidelines was updated in 2018. The number of significance thresholds have been reduced from six to four since the 2011 FEIR, but the objectives of the removed significance thresholds have essentially been retained in the remaining, altered significance thresholds.

The City adopted a new General Plan in 2012. While the new General Plan reorganized and rewrote the content pertaining to transportation, the majority of it retains the same objectives as the former General Plan. The new General Plan also includes additional content on utilizing green energy for transport and reducing reliance on automobiles.

The Countywide Comprehensive Transportation Plan was updated in 2017.

4.13.5 IMPACTS

4.13.5.1 Thresholds of Significance

Criteria for determining the significance of transportation impacts have been developed based on Appendix G of the CEQA Guidelines and relevant agency thresholds. Impacts associated with transportation would be considered significant if the Modified Project would do any of the following.

- Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities

- Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b), which states, as to land use projects: “Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high quality transit corridor should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be presumed to have a less than significant transportation impact.”
- Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)
- Result in inadequate emergency access

4.13.5.2 Method of Analysis

This section identifies any impacts to transportation operations that could occur from construction and operation of the Modified Project. Impacts to transportation operations were analyzed based on the TIA presented in **Appendix D**, and published information regarding transportation in the vicinity of the Project Site. This analysis focuses on the manner in which development could affect transportation operations in or near the Project Site compared to baseline conditions defined below. The analysis assumes development of Option 2 (Commercial-Heavy Option) as described in **Section 3.0** because that option would have greater transportation impacts than Option 1. Where it is concluded that impacts to transportation operations resulting from the Modified Project would exceed the significance thresholds listed below, mitigation measures are identified to reduce impacts to less-than-significant levels.

Analysis Methodology

Existing operational conditions at the study intersections have been evaluated according to the requirements set forth by the CCTA using the methodology included within the Final Technical Procedures Update (CCTA, 2013). Analysis of traffic operations was conducted using the 6th Edition of the Highway Capacity Manual (HCM) LOS methodology with Synchro software (Transportation Research Board, 2019). Level of service is a traffic flow scale, measuring the capacity of an intersection (or roadway segment) to accommodate the volume of traffic moving through it at any given time. The LOS scale ranges from A to F, with “A” indicating relatively free flow of traffic and “F” indicating stop-and-go traffic characterized by traffic jams. As described above, acceptable conditions on City roadways and at City signalized intersections are LOS D or better. LOS E is a near-capacity situation in which there is general instability in the traffic flow and relatively small incidents (e.g., momentary engine stall) can cause considerable fluctuations in speeds and delays that lead to traffic congestion. Beyond LOS E, the intersection or roadway segment capacity has been exceeded, and arriving traffic would exceed the ability of the intersection to accommodate it.

The primary basis of the analysis is the peak hour LOS for the key intersections. The hours identified as “peak” hours are generally between 7:15 a.m. and 8:15 a.m. and 4:30 p.m. and 5:30 p.m. for most of the transportation facilities described, based on the intersection turning movement counts collected for this analysis. Throughout this report, these peak hours will be identified as the AM and PM peak hours, respectively.

The goal of the City is to maintain an LOS of D during peak hours, according to the General Plan. LOS E is the threshold for intersections on San Pablo Avenue, as defined in the West County Action Plan and affirmed by Policy CR1.10 of the General Plan. The City does not have plans, ordinances, or policies establishing measures of effectiveness for the performance of other parts of its circulation system. The study area also includes intersections under the jurisdiction of the County and Caltrans. For the Caltrans freeway facilities, the operational standards and significance criteria are established by CCTA acting as the designated CMA representing the jurisdiction of the County. As the acting CMA, the CCTA establishes the traffic LOS standards for all State highway facilities in the County, which supersede the general Caltrans operational standards for all State highways. The City and CCTA measures of effectiveness are summarized below.

Signalized Intersections

For signalized intersections, the HCM methodology determines the capacity of each lane group approaching the intersection. The LOS is then based on average control delay (in seconds per vehicle) for movements within the intersection. A combined weighted average control delay and LOS are presented for the intersection. A summary of the HCM results and copies of the detailed HCM LOS calculations are included in **Appendix D**. **Table 4.13-1** summarizes the relationship between LOS, average control delay, and the volume to capacity ratio at signalized intersections. Project-related operational impacts on the signalized study intersections in the City are considered significant if project-related traffic causes the LOS rating to deteriorate from LOS D to LOS E or F, from LOS E to LOS F, or at an intersection already operating at an unacceptable LOS F if the Modified Project were to increase the volumes by more than one percent.

TABLE 4.13-1
SIGNALIZED INTERSECTION LEVEL OF SERVICE DEFINITIONS

LOS	Description of Operations	Average Delay (seconds/vehicle)	Volume to Capacity Ratio
A	Insignificant Delays: No approach phase ¹ is fully used and no vehicle waits longer than one red indication.	≤ 10	< 0.60
B	Minimal Delays: An occasional approach phase is fully used. Drivers begin to feel restricted.	> 10 to 20	> 0.61 to 0.70
C	Acceptable Delays: Major approach phase may become fully used. Most drivers feel somewhat restricted.	> 20 to 35	> 0.71 to 0.80
D	Tolerable Delays: Drivers may wait through no more than one red indication. Queues may develop but dissipate rapidly without excessive delays.	> 35 to 55	> 0.81 to 0.90
E	Significant Delays: Volumes approaching capacity. Vehicles may wait through several signal cycles and long vehicle queues from upstream.	> 55 to 80	> 0.91 to 1.00
F	Excessive Delays: Represents conditions at capacity, with extremely long delays. Queues may block upstream intersections.	> 80	> 1.00
Note: ¹ Phase is the part of the signal cycle allocated to any combination of traffic movements receiving the right of way simultaneously during one or more intervals. A phase includes the green, yellow change, and red clearance intervals. Approach is the set of lanes at an intersection that accommodates all left-turn, through, and right-turn movements from a given direction. Source: Appendix D .			

Unsignalized Intersections

For unsignalized intersections (all-way stop controlled and two-way stop controlled), the average control delay and LOS operating conditions are calculated by approach (e.g., NB) and by movement (e.g., NB left-turn) for those movements that are subject to delay. In general, the operating conditions for unsignalized intersections are presented for the worst approach. **Table 4.13-2** summarizes the relationship between LOS and average control delay at unsignalized intersections. Project-related operational impacts on unsignalized intersections are considered significant if project-generated traffic causes the worst-case movement (or average of all movements for all-way stop-controlled intersections and roundabouts) deteriorates from LOS D or better to LOS E or F.

TABLE 4.13-2
UNSIGNALIZED INTERSECTION LEVEL OF SERVICE DEFINITIONS

LOS	Description of Operations	Average Delay (seconds/vehicle)
A	No delay for stop-controlled approaches	0 to 10
B	Operations with minor delays	> 10 to 15
C	Operations with moderate delays	> 15 to 25
D	Operations with some delays	> 25 to 35
E	Operations with high delays and long queues	> 35 to 50
F	Operation with extreme congestion, with very high delays and long queues unacceptable to most drivers	> 50
Source: Appendix D.		

Freeway Delay

Consistent with the West County Action Plan, potential impacts to freeway operations were evaluated in terms of the delay index. The delay index measures travel congestion and is expressed as the ratio of the time required to travel between two points during the peak hour (the congested travel time) and the time required during uncongested off-peak times. For example, a delay index of 2.0 means that congested travel time is twice as long as during an off-peak travel time. The following shows the formula for calculating delay indices.

$$\text{Delay Index} = \text{Measured Peak Hour Travel Time} / \text{Free Flow Travel Time}$$

The measured peak hour travel time (the numerator of the delay index formula) was determined from speed runs conducted along I-580 during the AM and PM peak hours in the spring of 2019 as part of the CCTA CMP. The free flow travel time (the denominator of the delay index formula) is defined by the CCTA CMP as “the time it takes to traverse a roadway segment at the speed limit including the average uncongested delay experienced at traffic signals.”

It is important to note that achievement of the Multi-Modal Transportation Service Objectives (MTSO) delay index and average speed is measured over the length of I-580 from the Alameda County line to the Marin County line. For the I-580 freeway, the West County Action Plan specifies a maximum MTSO delay index of 2.5 (WCCTAC, 2017). For segments where the established delay index standard is already

exceeded, any increase in the delay index is considered a significant impact. For the Caltrans freeway facilities being studied, the operational standards and significance criteria are established by the CCTA acting as the designated CMA representing the jurisdictions of the County.

Transit, Bicycle, and Pedestrian Facilities

Potential impacts to transit, bicycle, and pedestrian facilities were evaluated based on the compliance of the Modified Project with applicable programs, plans, ordinances, or policies related to transit, bicycle, and pedestrian facilities.

Vehicle Miles Traveled

One performance measure that can be used to quantify the transportation impacts of a project is VMT. This section presents the extent of the VMT-related transportation impacts caused by the Modified Project. The City does not currently have an adopted CEQA threshold for VMT and the Modified Project is not in a Transit Priority Area; therefore, the Modified Project would not conflict with an applicable VMT threshold and VMT information in this SEIR is provided for informational purposes.

Analysis Scenarios

The following analysis scenarios were used to evaluate LOS impacts at the study intersections identified above. All other impact analyses in this section (i.e., transit, freeway delay) focus on the manner in which development could alter transportation in or near the Project Site under baseline conditions, which are defined for the purposes of the analysis in this section as physical conditions in the area on or around the publication of the Notice of Preparation in July 2019.

Existing Scenario

The existing intersection geometry and traffic volumes at each of the Modified Project study intersections can be seen in Figure 3 and Figure 4 of the TIA (**Appendix D**). Traffic counts at the study intersections were conducted in May of 2019 at times when local schools were in session. **Table 4.13-3** summarizes the associated LOS computation results for the existing weekday AM and PM peak hour conditions.

TABLE 4.13-3
EXISTING (2019) INTERSECTION LEVEL OF SERVICE CONDITIONS

Intersection		Control	Peak Hour	Existing	
				Delay	LOS
1	Castro Street & I-580 WB Off-Ramps/Chevron®	Signalized	AM	13.5	B
			PM	> 80.0	F
2	Marine Street & I-580 EB Ramps	Signalized	AM	2.3	A
			PM	8.8	A
3	Canal Boulevard & I-580 WB Ramps	Signalized	AM	10.1	B
			PM	17.7	B
4	Canal Boulevard & I-580 EB Ramps	Signalized	AM	14.8	B
			PM	14.9	B

Intersection		Control	Peak Hour	Existing	
				Delay	LOS
5	I-580 WB Ramps & Cutting Boulevard	Signalized	AM	5.0	A
			PM	4.6	A
6	I-580 EB Off-Ramp/Hoffman Boulevard & Cutting Boulevard	Signalized	AM	8.5	A
			PM	8.4	A
7	Harbour Way South & I-580 WB Off-Ramp	Side Street Stop	AM	12.0	B
			PM	20.6	C
8	Harbour Way South & Cutting Boulevard	Signalized	AM	26.7	C
			PM	25.9	C
9	Marina Bay Parkway & I-580 WB Ramps	Signalized	AM	6.3	A
			PM	7.3	A
10	Marina Bay Parkway & I-580 EB Ramps	Signalized	AM	9.0	A
			PM	6.7	A
11	Marina Bay Parkway & Cutting Boulevard	Signalized	AM	24.1	C
			PM	26.4	C
12	I-580 WB Ramps & Juliga Woods Street	Side Street Stop	AM	12.1	B
			PM	14.0	B
13	Regatta Boulevard & I-580 EB Off-Ramp	Signalized	AM	18.2	B
			PM	9.7	A
14	Carlson Boulevard & Cutting Boulevard	Signalized	AM	22.9	C
			PM	13.9	B
15	South 49th Street & Cutting Boulevard	Signalized	AM	30.2	C
			PM	14.1	B
16	I-80 WB Off-Ramp & Cutting Boulevard	Signalized	AM	10.5	B
			PM	9.0	A
17	Harbour Way & Macdonald Avenue	Signalized	AM	20.6	C
			PM	22.6	C
18	Richmond Parkway & Macdonald Avenue	Signalized	AM	9.7	A
			PM	9.9	A
19	Richmond Parkway & Barrett Avenue	Signalized	AM	9.2	A
			PM	13.0	B
20	Richmond Parkway & Hensley Street	Signalized	AM	5.7	A
			PM	4.5	A
21	Richmond Parkway & West Gertrude Avenue	Signalized	AM	17.2	B
			PM	41.6	D
22	Richmond Parkway & Parr Boulevard	Signalized	AM	22.5	C
			PM	26.8	C
23	Richmond Parkway & San Pablo Avenue	Signalized	AM	61.1	E
			PM	42.5	D
24	Blume Drive/I-80 WB Ramps & Richmond Parkway	Signalized	AM	74.2	E
			PM	39.0	D

Intersection		Control	Peak Hour	Existing	
				Delay	LOS
25	Richmond Parkway & I-80 NB/EB Ramps	Signalized	AM	6.0	A
			PM	9.8	A
26	Canal Boulevard & South Garrard Boulevard	Signalized	AM	16.4	B
			PM	19.5	B
27	Stenmark Drive & Dutra Materials	Side Street Stop	AM	8.8	A
			PM	8.9	A
28	Richmond Parkway & Pittsburg Avenue	Signalized	AM	12.8	B
			PM	12.7	B
29	Richmond Parkway & Goodrick Avenue	Signalized	AM	14.1	B
			PM	75.7	E
30	Castro Street & East Standard Avenue	Signalized	AM	2.0	A
			PM	1.8	A

Notes: Delay results are presented in terms of seconds per vehicle. Bolded and shaded values indicate LOS exceeding relevant thresholds.
Source: Abrams Associates, 2019 (**Appendix D**).

As shown in **Table 4.13-3**, nearly all of the Modified Project study intersections currently have acceptable conditions (LOS D or better) during the weekday AM and PM peak hours with the exception of Intersection #1 (Castro Street and the I-580 WB Off-Ramps/Chevron®), Intersection #23 (Richmond Parkway and San Pablo Avenue), Intersection #24 (Blume Drive/I-80 WB Ramps and Richmond Parkway), and Intersection #29 (Richmond Parkway and Goodrick Avenue) which would all exceed their established LOS standards. Refer to **Section 4.13.5** for a description of the applicable intersection thresholds.

Cumulative (2040) Scenario

For the cumulative conditions, the intersection traffic volumes were based on the existing turning movements plus incremental growth in background traffic (0.5 percent per year) based on the 2040 buildout within the CCTA Countywide Travel Demand Model. No roadway improvements were assumed for the cumulative (2040) scenario as funding has not been identified for future roadway improvements in the vicinity of the Project Site. Figure 10 of the TIA (**Appendix D**) presents the cumulative build-out traffic volumes for the Modified Project study intersections. **Table 4.13-4** summarizes the LOS results for the cumulative (year 2040) traffic conditions at each of the Modified Project study intersections.

As shown in **Table 4.13-4**, the Modified Project study intersections would continue to have acceptable conditions during the weekday AM and PM peak commute hours with the exception of Intersection #1 (Castro Street and the I-580 WB Off-Ramps/Chevron®), Intersection #21 (Richmond Parkway and West Gertrude Avenue), Intersection #22 (Richmond Parkway and Parr Boulevard), Intersection #23 (Richmond Parkway and San Pablo Avenue), Intersection #24 (Blume Drive/I-80 WB Ramps and Richmond Parkway), and Intersection #29 (Richmond Parkway and Goodrick Avenue), which would all exceed their established LOS standards. Refer to **Section 4.13.5** for a description of the applicable intersection thresholds.

TABLE 4.13-4
CUMULATIVE INTERSECTION LEVEL OF SERVICE CONDITIONS

Intersection		Control	Peak Hour	Cumulative	
				Delay	LOS
1	Castro Street & I-580 WB Off-Ramps/Chevron®	Signalized	AM	14.1	B
			PM	> 80.0	F
2	Marine Street & I-580 EB Ramps	Signalized	AM	2.1	A
			PM	1.7	A
3	Canal Boulevard & I-580 WB Ramps	Signalized	AM	11.1	B
			PM	24.3	C
4	Canal Boulevard & I-580 EB Ramps	Signalized	AM	17.2	B
			PM	17.0	B
5	I-580 WB Ramps & Cutting Boulevard	Signalized	AM	5.1	A
			PM	4.7	A
6	I-580 EB Off-Ramp/Hoffman Boulevard & Cutting Boulevard	Signalized	AM	9.0	A
			PM	8.7	A
7	Harbour Way South & I-580 WB Off-Ramp	Side Street Stop	AM	13.1	B
			PM	30.6	D
8	Harbour Way South & Cutting Boulevard	Signalized	AM	31.1	C
			PM	30.1	C
9	Marina Bay Parkway & I-580 WB Ramps	Signalized	AM	6.8	A
			PM	7.9	A
10	Marina Bay Parkway & I-580 EB Ramps	Signalized	AM	10.1	B
			PM	7.2	A
11	Marina Bay Parkway & Cutting Boulevard	Signalized	AM	28.0	C
			PM	32.2	C
12	I-580 WB Ramps & Juliga Woods Street	Side Street Stop	AM	12.9	B
			PM	16.0	C
13	Regatta Boulevard & I-580 EB Off-Ramp	Signalized	AM	31.6	C
			PM	10.1	B
14	Carlson Boulevard & Cutting Boulevard	Signalized	AM	28.7	C
			PM	15.7	B
15	South 49th Street & Cutting Boulevard	Signalized	AM	39.7	D
			PM	19.6	B
16	I-80 WB Off-Ramp & Cutting Boulevard	Signalized	AM	12.4	B
			PM	10.3	B
17	Harbour Way & Macdonald Avenue	Signalized	AM	24.9	C
			PM	28.4	C
18	Richmond Parkway & Macdonald Avenue	Signalized	AM	10.9	B
			PM	13.0	B
19	Richmond Parkway & Barrett Avenue	Signalized	AM	10.7	B
			PM	17.7	B

Intersection		Control	Peak Hour	Cumulative	
				Delay	LOS
20	Richmond Parkway & Hensley Street	Signalized	AM	5.7	A
			PM	5.6	A
21	Richmond Parkway & West Gertrude Avenue	Signalized	AM	39.3	D
			PM	> 80.0	F
22	Richmond Parkway & Parr Boulevard	Signalized	AM	54.6	D
			PM	66.1	E
23	Richmond Parkway & San Pablo Avenue	Signalized	AM	> 80.0	F
			PM	66.8	E
24	Blume Drive/I-80 WB Ramps & Richmond Parkway	Signalized	AM	> 80.0	F
			PM	62.0	E
25	Richmond Parkway & I-80 NB/EB Ramps	Signalized	AM	6.3	A
			PM	13.2	B
26	Canal Boulevard & South Garrard Boulevard	Signalized	AM	19.0	B
			PM	25.1	C
27	Stenmark Drive & Dutra Materials	Side Street Stop	AM	10.9	A
			PM	13.0	A
28	Richmond Parkway & Pittsburg Avenue	Signalized	AM	28.4	C
			PM	29.4	C
29	Richmond Parkway & Goodrick Avenue	Signalized	AM	34.5	C
			PM	> 80.0	F
30	Castro Street & East Standard Avenue	Signalized	AM	1.9	A
			PM	1.8	A
Notes: Delay results are presented in terms of seconds per vehicle. Bolded and shaded values indicate LOS exceeding relevant thresholds. Source: Appendix D .					

Trip Generation and Distribution

The proposed the Modified Project would consist of the components listed below, which have been separated into the land use categories required for Modified Project trip generation forecasting.

1. Retail and Restaurants – 40,000 sq. ft.
2. Commercial Space (assumed to be Office) – 584,574 sq. ft.
3. Single Family Homes – 274 units
4. Low-Rise Apartments and Townhomes (1 to 2 floors) – 636 units¹
5. Mid-Rise Apartments and Condominiums (3 to 10 floors) – 350 units

¹ From a traffic perspective, low-rise residential units are one to two stories. Low-rise residential units produce more trips than mid-rise residential units. The Modified Project's low-rise residential units would be one to three stories, which means that some of the low-rise units would be classified as mid-rise units in a traffic analysis. Because the traffic analysis for this SEIR overestimates the number of low-rise units (assuming all 636 units would be one to two stories), it is conservative.

6. Public Ferry Parking – 100 parking spaces

The above-listed quantities represent worst-case assumptions with respect to trip generation for the Project Site, and assumes under Option 2 that all of the commercial space is used for office, which has higher trip generation rates than other permitted commercial uses, including light industrial, institutional, and neighborhood serving retail and restaurant uses after accounting for internalization, or residential uses). The majority of the existing buildings on the Project Site are currently vacant so no reductions in traffic were taken to account for the removal of any existing land uses. The resulting trip generation calculations are shown in **Table 4.13-5**. They are based on trip generation rates from the ITE Trip Generation Manual, 10th Edition. The total trip generation reflects all vehicle trips that would be counted at the Modified Project driveways, both inbound and outbound.

Based on methodology from the ITE Trip Generation Handbook, there was a 25 percent reduction for the retail and restaurant components of the Modified Project to account for pass-by trips from the existing traffic stream on the nearby I-580 freeway (**Appendix D**). In addition, based on the ITE Trip Generation Manual, a 20 percent reduction was taken to account for internal trips between the various uses on the Project Site as well as a 10 percent reduction based on the measures in the Modified Project's proposed TDM plan, which is the maximum consistent with CCTA technical procedures.² The TDM reduction was only applied to the trip generation after accounting for internal trip reductions.

The TDM plan is described in **Section 3.4.3.4** and is currently planned to include shuttle service to the Richmond BART Station and facilities for bicycle commuters. For the purposes of determining the reasonable worst-case impacts of traffic on the surrounding street network from the Modified Project, the trips generated by Option 2 are estimated for the peak commute hours of 7:15 a.m. to 8:15 a.m. and 4:30 p.m. to 5:30 p.m., which represent the peak of "adjacent street traffic." This is the time period when the Modified Project traffic would generally contribute to the greatest amount of congestion.

The trip distribution assumptions have been based on the proximity of the Modified Project to freeway interchanges, the existing directional split at nearby intersections, and the overall land use patterns in the area as determined from the Countywide Travel Demand Model. Figure 6 of the TIA presents the Modified Project trip distribution percentages and Figure 7 of the TIA shows the Modified Project traffic that would be added at each of the study intersections (**Appendix D**).

² The TDM measures would reduce trips by 26 percent for Option 1 and 23 percent for Option 2, but because CCTA permits a maximum of a 10 percent reduction, this SEIR uses a 10 percent reduction for the trip analysis. However, to determine compliance with the City's TDM requirements, the City considers the full trip reductions anticipated by the TDM.

TABLE 4.13-5
PROJECT TRIP GENERATION CALCULATIONS

Land Use	Size	Average Daily Traffic	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Retail and Restaurant Trip Rates		42.7	0.60	0.36	0.96	1.78	1.93	3.71
Unadjusted Retail and Restaurant Trip Generation	40,000 sq. ft.	1,708	23	15	38	71	77	148
25 percent Reduction for Pass-By Trips		427	6	4	10	18	19	37
Net New Retail and Restaurant Trip Generation		1,281	17	11	28	53	58	111
Office Trip Rates		8.18	0.81	0.13	0.94	0.13	0.71	0.84
Office Trip Generation	584,574 sq. ft.	4,782	472	77	549	79	412	491
Single Family Home Trip Rates		9.60	0.18	0.55	0.73	0.60	0.36	0.96
Single Family Home Trip Generation	274 units	2,630	50	150	200	166	97	263
Low-Rise Apartments and Townhomes Trip Rates		7.50	0.09	0.37	0.46	0.31	0.17	0.48
Low-Rise Apartments and Townhomes Trip Generation	636 units	4,770	59	234	293	198	107	305
Mid-Rise Apartments and Condominiums Trip Rates		5.45	0.09	0.24	0.33	0.31	0.17	0.48
Mid-Rise Apartments and Condominiums Trip Generation	350 units	1,908	30	86	116	90	57	147
Ferry Parking Trip Rates		2.81	0.33	0.09	0.42	0.11	0.32	0.43
Public Ferry Parking	100 spaces	281	33	9	42	11	32	43
<i>Subtotals</i>		<i>15,652</i>	<i>661</i>	<i>566</i>	<i>1,228</i>	<i>597</i>	<i>764</i>	<i>1,361</i>
Internal Trip Reduction (20 percent)		3,130	133	113	246	119	153	272
TDM Trip Reduction (10 percent)		1,252	53	45	98	48	61	109
Net New Off-Site Trip Generation from the Modified Project		11,270	476	408	884	430	550	980
Notes: For land uses that are represented in square footages, the trip rate constitutes trip generation per 1,000 sq. ft. Source: Appendix D.								

4.13.5.3 Effects Found Not to be Significant Without Further Analysis

Review and comparison of the existing setting conditions and the Modified Project characteristics with the significance criteria show that the Modified Project has the potential to create significant impacts to transportation under all of the significance criteria except criteria 2. For this reason, all significance criteria except criteria 2 are analyzed below.

Criteria 2 asks whether a project would have vehicle miles traveled exceeding an applicable threshold of significance. As noted above, the City has not yet adopted a VMT threshold for CEQA purposes, and the deadline under the CEQA Guidelines for commencing use of VMT outside transit priority areas has not yet occurred. The Project Site is not in a transit priority area.

For jurisdictions that have not developed individual VMT models, VMT is typically estimated using an area-wide travel demand model from a regional transportation agency that calculates VMT based on the number of vehicles multiplied by the typical distance traveled by each vehicle originating from or driving to a certain area. As with all models, the accuracy of the output depends on the level of detail in the model. The volume of traffic and distance traveled depends on land use types, density, and location as well as the existing and planned future supporting transportation system, including availability of public transportation. A travel demand model attempts to represent this relationship when forecasting vehicle trips and VMT. This analysis uses the Metropolitan Transportation Commission (MTC) Travel Model to estimate VMT per capita for the Project.

The MTC Travel Model divides areas within MTC's jurisdiction into transportation analysis zones (TAZ). The MTC Travel Model includes 18 TAZs within the City that vary in size from a few city blocks in the downtown area, to larger geographic areas in lower density areas, such as Point Richmond. The Modified Project TAZ 1062 is shown in **Figure 4.13-2**. TAZs are used in transportation planning models for transportation analysis and other planning purposes.

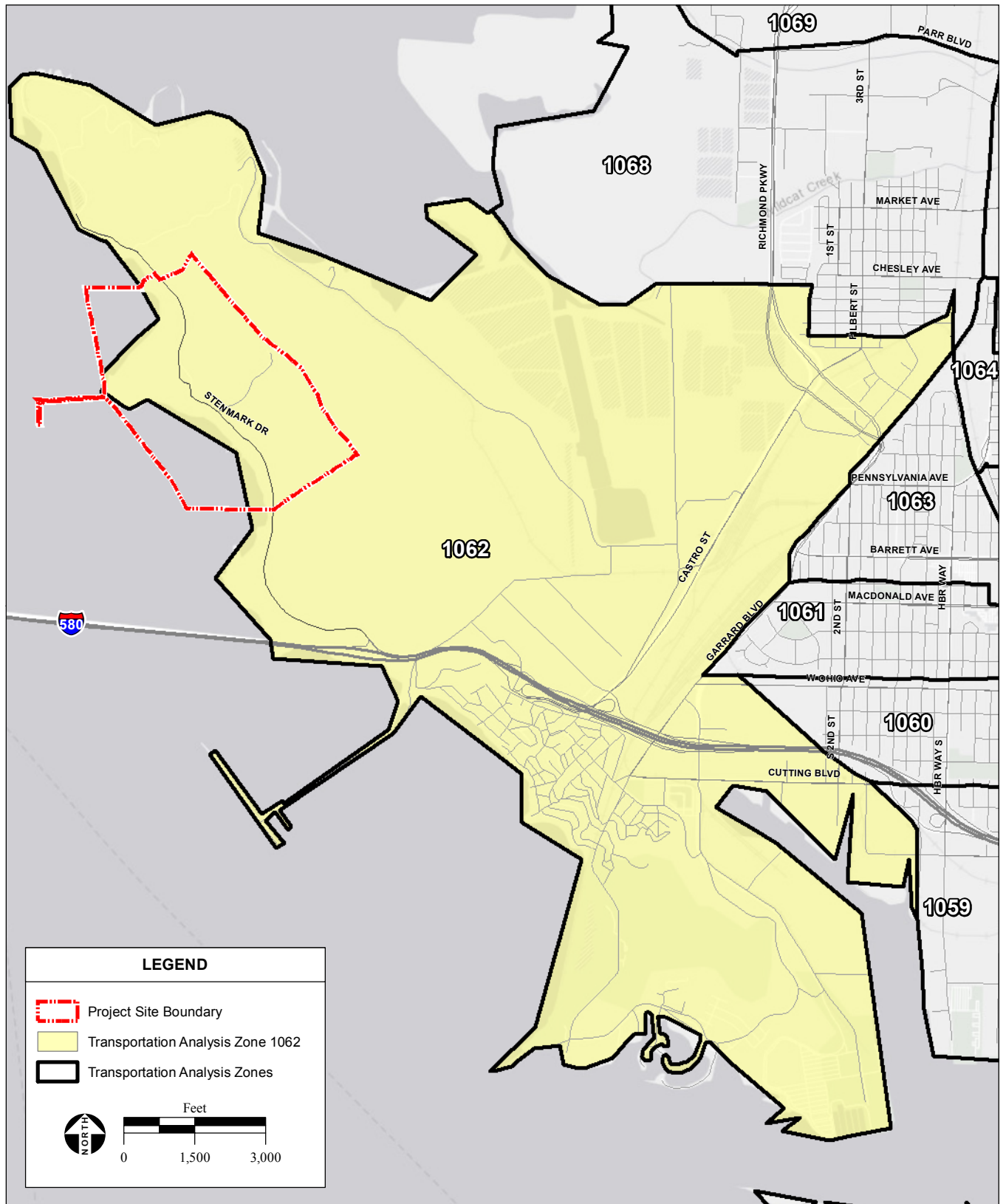
2020 VMT INFORMATION

Based on the MTC Travel Model, the Bay Area regional average daily VMT per capita is estimated to be 15.0 in the year 2020. **Table 4.13-6** summarizes the 2020 VMT per capita for TAZ 1062, the TAZ in which the Modified Project is located, and provides a comparison to regional and City-wide averages under existing conditions. The TAZ has a higher VMT per capita than the City or the Bay Area region averages under existing conditions. The TAZ currently lacks convenient access to regional transit options such as BART, AC Transit, or the Richmond Ferry.

The MTC Travel Model also estimates VMT per employee for TAZ's throughout the Bay Area. Based on the MTC Travel Model, the Bay Area regional average daily VMT per employee is estimated to be 14.4 miles in the year 2020, and the City's average is estimated to be at 22.3. **Table 4.13-6** summarizes the 2020 VMT per employee for the TAZ in which the Modified Project is located and provides a comparison to regional and Citywide averages.

TABLE 4.13-6
2020 DAILY VEHICLE MILES TRAVELED

Area	Daily Vehicle Miles Traveled per Capita in Year 2020	Daily Vehicle Miles Traveled per Employee in Year 2020
TAZ 1062	21.7	31.0
City	13.9	22.3
Bay Area	15.0	14.4
Source: Abrams Associates, 2019 (Appendix D).		



SOURCE: Metropolitan Transportation Commission, 2013; ESRI World Street Map, 2019; AES, 12/12/2019

Point Molate Mixed-Use Development SEIR / 216544 ■

Figure 4.13-2
Transportation Analysis Zone

2040 VMT INFORMATION

Table 4.13-7 summarizes the 2040 VMT per capita for TAZ 1062, the TAZ in which the Modified Project is located, and provides a comparison to regional and City-wide averages. Overall, VMT in 2040 is lower than in 2020. TAZ 1062 has a higher VMT per capita than the City or the Bay Area region averages under 2040 conditions.

TABLE 4.13-7
2040 DAILY VEHICLE MILES TRAVELED

Area	Daily Vehicle Miles Traveled per Capita in Year 2040	Daily Vehicle Miles Traveled per Employee in Year 2040
TAZ 1062 (Modified Project)	20.7	29.6
City	12.7	20.4
Bay Area	13.8	13.2
Source: Abrams Associates, 2019 (Appendix D).		

Table 4.13-7 also summarizes the 2040 VMT per employee for the TAZ in which the Modified Project is located and provides a comparison to regional and Citywide averages. Based on the MTC Travel Model, the Bay Area regional average daily VMT per employee is estimated to be 13.2 miles in the year 2040. TAZ 1062 would have a higher VMT per capita than the City of Richmond or Bay Area region averages under 2040 conditions.

Due to modeling limitations, the VMT for TAZ 1062 is used to represent the Modified Project's anticipated VMT in 2040. However, the Modified Project has many trip reduction features that are atypical for TAZ 1062, including its Transportation Demand Management (TDM) program. In compliance with RMC § 15.04.612, implementation of the TDM program is required under **Mitigation Measure 4.13-6**. The Modified Project also proposes to create a walkable, mixed-use community and would provide a commuter shuttle to the BART station or work with AC transit to provide bus service from the Project Site to BART. The Modified Project also proposes to provide ferry or water taxi service to San Francisco. However, even with these improvements and the estimated 26 percent and 23 percent reductions in trip generation from the TDM plan under Option 1 and Option 2, respectively, it is still anticipated that the Modified Project's per capita and per employee VMT could exceed the City's average per capita and per employee VMT. As per RMC § 15.04.612, the Modified Project would obtain GreenTRIP Certification from TransForm. One purpose of this code section is to reduce VMT, and the measures required to obtain GreenTRIP Certification, such as providing copious bicycle parking and a mix of uses, will reduce VMT.³ As mentioned above, the City does not have VMT thresholds for CEQA purposes; however, the Modified Project's is consistent with RMC provisions to reduce trips and VMT.

³ The eligibility requirements to obtain GreenTRIP certification can be found at this website: <https://www.transformca.org/greentrip/apply-for-certification>.

The Bay Trail as a component of the Modified Project would not conflict with program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

The Bay Trail would complement the General Plan Circulation Element because it would promote bicycle use and provide additional access to City recreation areas and parks. The Modified Project is part of the East Bay Regional Park District Bay Trail network benefiting pedestrians, bicyclists, and trail users, thereby promoting the use of alternative transportation.

4.13.5.4 Project-Level Impacts

IMPACT 4.13.1	CONSTRUCTION: CONFLICT WITH PROGRAM, PLAN, ORDINANCE, OR POLICY ADDRESSING ROADWAYS DURING CONSTRUCTION
Significance Before Mitigation	Less Than Significant
Mitigation Measures	None Required
Significance After Mitigation	Not Applicable
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

The increase in traffic as a result of demolition and construction activities associated with the Modified Project and associated off-site infrastructure improvements has been quantified assuming a worst-case single phase construction period of seven years.

Heavy Equipment

Approximately 15 pieces of heavy equipment are estimated to be transported on and off the Project Site each month throughout the remediation, demolition, and construction phases of the Modified Project. Heavy equipment transport to and from the Project Site could cause traffic impacts in the vicinity of the Project Site during construction. However, each load would be required to comply with the Traffic Control Plan pursuant to Section 12.29.040 of the RMC.

Construction Material Import/Export

The Modified Project would also require removal of existing debris and contaminated soil as well as the importation of construction material, including raw materials for the building pads, the buildings, the parking area, and landscaping. During the maximum peak construction period, the Modified Project could generate approximately 150 truck trips per day.

Construction Employees

The weekday work is expected to begin around 7:00 a.m. and end around 4:00 p.m. The construction worker arrival peak would occur between 6:30 a.m. and 7:30 a.m., and the departure peak was assumed to occur during the traffic peak period between 4:00 p.m. and 5:00 p.m. It should be noted that the

number of trips generated during construction would not only be temporary, but would also be substantially less than the Modified Project at buildout.

Construction within Right-of-Way

As described in **Section 3.4**, the Modified Project includes the widening of Stenmark Drive, as well as the installation of new utility service connections underneath the roadway. Construction of these improvements could result in temporary impacts to traffic operations on Stenmark Drive and nearby roadways.

Prior to issuance of grading and building permits, Winehaven Legacy LLC (the Applicant) would be required to submit a Traffic Control Plan pursuant to RMC § 12.29.040. The requirements within the Traffic Control Plan shall include, but not be limited to, the following.

- Truck drivers would be notified of and required to use the most direct route between the Project Site and I-580, as determined by the City Engineering Department.
- All Project Site ingress and egress would occur only at the main driveways to the Project Site and construction activities may require installation of temporary (or ultimate) traffic signals as determined by the City Engineer; specifically designated travel routes for large vehicles would be monitored and controlled by flaggers for large construction vehicle ingress and egress.
- Warning signs indicating frequent truck entry and exit would be posted on Stenmark Drive.
- Any debris and mud on nearby streets caused by trucks would be monitored daily and may require the establishment of a street cleaning program.

Furthermore, under the provisions of the Traffic Control Plan, if importation and exportation of material becomes a traffic nuisance, then the City Engineer may limit the hours during which activities may occur.

Conclusion

With implementation of the Modified Project-specific Traffic Control Plan and approval from the City Engineer, traffic associated with construction of the Modified Project would not conflict with any program, plan, or policy addressing the circulation system. This would be a less-than-significant impact.

IMPACT 4.13.2	OPERATIONS: CONFLICT WITH PROGRAM, PLAN, ORDINANCE, OR POLICY ADDRESSING ROADWAYS DURING OPERATION ASSUMING EXISTING PLUS PROJECT CONDITIONS
Significance Before Mitigation	Significant
Mitigation Measures	Modified Project Mitigation: MM 4.13-1 (a); MM 4.13-1 (e)
Significance After Mitigation	Significant and Unavoidable
Comparison with 2011 FEIR	New Significant Impact (impacts are at different intersections)

This scenario evaluates the existing conditions with the addition of traffic from the Modified Project. The traffic volumes for each of the study intersections for the existing plus project scenario are shown in Figure 8 of the TIA (**Appendix D**). The capacity calculations for the existing plus project scenario are shown in **Table 4.13-8**.

TABLE 4.13-8
EXISTING PLUS PROJECT INTERSECTION LEVEL OF SERVICE CONDITIONS

Intersection		Control	Peak Hour	Existing		Existing Plus Project	
				Delay	LOS	Delay	LOS
1	Castro Street & I-580 WB Off-Ramps/Chevron®	Signalized	AM	13.5	B	13.9	B
			PM	> 80.0	F	> 80.0	F
2	Marine Street & I-580 EB Ramps	Signalized	AM	2.3	A	2.0	A
			PM	8.8	A	14.9	B
3	Canal Boulevard & I-580 WB Ramps	Signalized	AM	10.1	B	10.2	B
			PM	17.7	B	20.0	C
4	Canal Boulevard & I-580 EB Ramps	Signalized	AM	14.8	B	17.2	B
			PM	14.9	B	15.9	B
5	I-580 WB Ramps & Cutting Boulevard	Signalized	AM	5.0	A	4.9	A
			PM	4.6	A	4.6	A
6	I-580 EB Off-Ramp/Hoffman Boulevard & Cutting Boulevard	Signalized	AM	8.5	A	8.7	A
			PM	8.4	A	8.5	A
7	Harbour Way South & I-580 WB Off-Ramp	Side Street Stop	AM	12.0	B	12.2	B
			PM	20.6	C	21.4	C
8	Harbour Way South & Cutting Boulevard	Signalized	AM	26.7	C	27.5	C
			PM	25.9	C	26.7	C
9	Marina Bay Parkway & I-580 WB Ramps	Signalized	AM	6.3	A	6.3	A
			PM	7.3	A	7.4	A
10	Marina Bay Parkway & I-580 EB Ramps	Signalized	AM	9.0	A	9.2	A
			PM	6.7	A	7.1	A
11	Marina Bay Parkway & Cutting Boulevard	Signalized	AM	24.1	C	24.7	C
			PM	26.4	C	27.6	C
12	I-580 WB Ramps & Juliga Woods Street	Side Street Stop	AM	12.1	B	12.4	B
			PM	14.0	B	14.6	B
13	Regatta Boulevard & I-580 EB Off-Ramp	Signalized	AM	18.2	B	18.7	B
			PM	9.7	A	9.7	A
14	Carlson Boulevard & Cutting Boulevard	Signalized	AM	22.9	C	23.2	C
			PM	13.9	B	14.0	B
15	South 49th Street & Cutting Boulevard	Signalized	AM	30.2	C	30.1	C
			PM	14.1	B	14.6	B
16	I-80 WB Off-Ramp & Cutting Boulevard	Signalized	AM	10.5	B	10.6	B
			PM	9.0	A	9.1	A
17		Signalized	AM	20.6	C	21.1	C

Intersection		Control	Peak Hour	Existing		Existing Plus Project	
				Delay	LOS	Delay	LOS
	Harbour Way & Macdonald Avenue		PM	22.6	C	23.1	C
18	Richmond Parkway & Macdonald Avenue	Signalized	AM	9.7	A	9.9	A
			PM	9.9	A	11.0	B
19	Richmond Parkway & Barrett Avenue	Signalized	AM	9.2	A	9.4	A
			PM	13.0	B	14.1	B
20	Richmond Parkway & Hensley Street	Signalized	AM	5.7	A	5.7	A
			PM	4.5	A	4.8	A
21	Richmond Parkway & West Gertrude Avenue	Signalized	AM	17.2	B	20.3	C
			PM	41.6	D	52.1	D
22	Richmond Parkway & Parr Boulevard	Signalized	AM	22.5	C	27.8	C
			PM	26.8	C	35.5	D
23	Richmond Parkway & San Pablo Avenue ¹	Signalized	AM	61.1	E	65.6	E
			PM	42.5	D	44.9	D
24	Blume Drive/I-80 WB Ramps & Richmond Parkway	Signalized	AM	74.2	E	> 80.0	F
			PM	39.0	D	45.7	D
25	Richmond Parkway & I-80 NB/EB Ramps	Signalized	AM	6.0	A	6.0	A
			PM	9.8	A	9.9	A
26	Canal Boulevard & South Garrard Boulevard	Signalized	AM	16.4	B	16.4	B
			PM	19.5	B	21.1	C
27	Stenmark Drive & Dutra Materials	Side Street Stop	AM	8.8	A	20.2	C
			PM	8.9	A	35.0	E
28	Richmond Parkway & Pittsburg Avenue	Signalized	AM	12.8	B	15.0	B
			PM	12.7	B	15.5	B
29	Richmond Parkway & Goodrick Avenue	Signalized	AM	14.1	B	16.8	B
			PM	75.7	E	> 80.0	F
30	Castro Street & East Standard Avenue	Signalized	AM	2.0	A	2.0	A
			PM	1.8	A	1.8	A
Notes: Delay results are presented in terms of seconds per vehicle. Bolded and shaded values indicate LOSs that exceed relevant thresholds. ¹ The LOS threshold at San Pablo Avenue intersections is LOS E. Source: Abrams Associates, 2019.							

As shown in **Table 4.13-8**, all of the signalized study intersections would have acceptable conditions (LOS D or better) during the weekday AM and PM peak hours with the exception of Intersection #1 (Castro Street and the I-580 WB Off-Ramps/Chevron®), Intersection #24 (Blume Drive/I-80 WB Ramps and Richmond Parkway), Intersection #27 (Stenmark Drive and Dutra Materials), and Intersection #29 (Richmond Parkway and Goodrick Avenue) that would all exceed the established standards. Under this scenario, Intersection #27 would worsen in traffic conditions from LOS C to E. The other three intersections are forecast to continue exceeding the established LOS standards regardless of whether the Modified Project is implemented. However, the Modified Project would increase the peak hour volumes by

more than one percent at each of these three intersections. Therefore, the contribution of the Modified Project to traffic at these intersections would be considered a significant impact.

Implementation of the Modified Project's improvements to Stenmark Drive, as described in **Section 3.4.3.1**, would reduce the impact at Intersection #27 (Stenmark Drive and Dutra Materials) to a less-than-significant level in the existing plus project scenario.

Implementation of **Mitigation Measure 4.13-1 (a)** and **Mitigation Measure 4.13-1 (e)** would reduce the impacts at Intersection #1 and Intersection #29, respectively, in the existing plus project scenario. As these intersections are not under the jurisdiction of the City, the City does not control the funding, prioritization, and/or construction of improvement projects. Therefore, the impacts at Intersection #1 and Intersection #29 would remain significant and unavoidable.

As described above, Intersection #24 is forecast to exceed the established LOS standards regardless of whether the Modified Project is implemented. The West County Action Plan outlines the plans for transportation and traffic improvements in western Contra Costa County. While this plan includes improvements and reconstruction for several interchanges along I-80, the Richmond Parkway interchange is not one of them and there are currently no planned improvements that would address and/or mitigate the poor operations that currently exist at the intersection of the Richmond Parkway with the I-80 WB ramps and Blume Drive (Intersection #24). It should be noted there is one planned project that could eventually result in changes in close proximity to this intersection. This is Action #50 in the West County Action Plan which is to "Implement the Express Bus recommendations from the West County High Capacity Transit Study." This is a long-term plan for express bus service on I-80 that is currently only a recommendation, and has not yet been funded. However, this plan would only add new ramps to the existing high occupancy vehicle lanes that would be accessed from the existing signalized intersection middle of the Richmond Parkway freeway overpass (i.e., no changes are proposed at the Blume Drive intersection). It is important to note that even if Express Bus recommendations were fully implemented, there is no evidence that this would change the geometry of the intersection of the Richmond Parkway with the I-80 WB ramps and Blume Drive or that this would reduce the significance of the impact. The County has not identified any further improvements that would address the LOS operations at this intersection, therefore the Modified Project's contribution to traffic at this intersection would remain significant and unavoidable.

IMPACT 4.13.3	OPERATIONS: CONFLICT WITH PROGRAM, PLAN, ORDINANCE, OR POLICY ADDRESSING ROADWAYS DURING SPECIAL EVENTS
Significance Before Mitigation	Significant
Mitigation Measures	Modified Project Mitigation: MM 4.13-3
Significance After Mitigation	Significant and Unavoidable
Comparison with 2011 FEIR	New Significant Impact

As shown in **Table 4.13-9**, the delay index on westbound I-580 during the AM peak hour currently exceeds the MTSO of 2.5 and therefore any increase to the delay index resulting from the Modified Project would be considered a potentially significant impact. The Modified Project would add traffic to I-580 WB during the existing AM peak hour. Therefore, the Modified Project would cause a potentially significant impact on freeway operations along this segment. Implementation of **Mitigation Measure 4.13-3** would reduce the above-identified impact by requiring payment of traffic impact fees to fund regional freeway system improvements, including I-580 improvements. CCTA has established plans to relieve traffic congestion and reduce traffic delays by modernizing facilities, expanding pedestrian and bicycling options, improving transit reliability, and encouraging the use of carpools and buses. Specific improvements to be considered: 1) Extending the carpool lane along I-580 from the toll plaza at the Richmond-San Rafael Bridge to Central Avenue in El Cerrito, 2) Making improvements so that pedestrians and cyclists can better access the Richmond-San Rafael Bridge, Richmond Parkway, Richmond Ferry Terminal, and Richmond BART Station, 3) Improving the interchange at Richmond Parkway and I-580, 4) Providing incentives for using alternative transportation options. However, these improvements would not reduce the impacts to a less-than-significant level.

Because the Applicant and the City do not control the funding, prioritization, and/or construction of improvements to I-580 needed to address this impact, this impact would remain significant and unavoidable.

TABLE 4.13-9
EXISTING INTERSTATE 580 FREEWAY DELAY INDEX CALCULATION

Scenario	Direction	MTSO	Without Modified Project	With Modified Project
Existing AM Peak Hour (2019)	EB	2.5	1.5	1.5
	WB	2.5	3.9	4.1
Existing PM Peak Hour (2019)	EB	2.5	1.0	1.1
	WB	2.5	1.1	1.1
Source: Abrams Associates, 2019 (Appendix D).				

IMPACT 4.13.4	OPERATIONS: CONFLICT WITH PROGRAM, PLAN, ORDINANCE, OR POLICY ADDRESSING ROADWAYS DURING SPECIAL EVENTS
Significance Before Mitigation	Potentially Significant
Mitigation Measures	Modified Project Mitigation: MM 4.13-4
Significance After Mitigation	Less Than Significant
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

It is anticipated that there could be special events or festivals held at the Project Site several times per year. There would be an increase in vehicles coming to and from the Project Site during special events. Given that the Modified Project would only have a two-lane road for access to the Project Site, preliminary calculations were conducted on the maximum number of people the access roadway to the Project Site could handle during special events. For trip generation purposes, it was assumed that vehicles would be arriving with 1.6 passengers per vehicle and that up to 40 percent of the inbound and outbound event traffic could occur during the peak weekday or weekend hours (**Appendix D**).

Based on an analysis of traffic operations at the I-580 interchange with Stenmark Drive, it was determined that the maximum additional inbound or outbound traffic that could be accommodated during the peak hours would be approximately 800 vehicles. Extrapolating from this amount of traffic, it was estimated that the maximum event size that could be adequately accommodated with the currently planned roadway system would be approximately 3,200 people. Based on this analysis, it is expected that any event with more than about 3,000 people could potentially result in significant queuing problems associated with motorists arriving and/or leaving the event. This would be a potentially significant impact.

Implementation of **Mitigation Measure 4.13-4** would require the Applicant to prepare a Traffic Monitoring and Management Program on an event-by-event basis, subject to City approval, that would apply to any events with a potential to generate 800 inbound or outbound vehicle trips (i.e., events with an anticipated attendance of at least 3,000 people) during the weekday or weekend peak hours. The Traffic Monitoring and Management Program would provide locations for off-site parking and mass transportation options, as well as recommendations to stagger inbound and/or outbound trips, and provide details about how parking information would be transmitted to event attendees, to ensure that vehicle trips into or out of the Project Site during an event would not exceed 800 during the peak weekday or weekend hours. Adherence to the Traffic Monitoring and Management Program would reduce the potential impacts from special event traffic to a less-than-significant level.

IMPACT 4.13.5	CONFLICT WITH PROGRAM, PLAN, ORDINANCE, OR POLICY ADDRESSING TRANSIT DURING OPERATION
Significance Before Mitigation	Less Than Significant
Mitigation Measures	None Required
Significance After Mitigation	Not Applicable
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

The General Plan goals and policies emphasize the need to encourage public transit use in the region. General Plan Goal CR1 calls for an expanded multimodal circulation system, and Policy CR1.4 encourages expanded and affordable public transit options (City of Richmond, 2012). The Modified Project could potentially help support existing bus services with additional transit ridership and would not conflict with any transit plans or goals of the BART, the City, WestCAT, or AC Transit. Additionally, the reuse of the pier described in **Section 3.4.4** would allow for the addition of passenger ferry service to the

Project Site. Ferry service would have a beneficial impact by reducing the load on local vehicular traffic, rail, bus, and other transit services. As a result, the Modified Project would not be expected to result in any significant impacts to transit service in the area.

IMPACT 4.13.6	CONFLICT WITH PROGRAM, PLAN, ORDINANCE, OR POLICY ADDRESSING BICYCLE OR PEDESTRIAN FACILITIES DURING OPERATION
Significance Before Mitigation	Beneficial Impact
Mitigation Measures	None Required
Significance After Mitigation	Not Applicable
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

The City does not have LOS standards for pedestrian or bicycle facilities. Nevertheless, use of existing facilities by the users of the Modified Project would not be expected to overcrowd those facilities or decrease their performance or safety. The Modified Project would generate a significant increase in pedestrian traffic in the area when compared to the existing volumes. However, the Modified Project is proposing to provide sufficient pedestrian pathways and signage within the Modified Project and along Stenmark Drive between the Project Site and the Bay Trail to ensure that pedestrian and bicycle safety is maintained. Roads would be designed to be “complete streets” and sidewalks and bicycle lanes would meet the City’s standards for such improvements, which are adopted to ensure the safety of pedestrian and cyclists. The Modified Project would not significantly impact or change the design of any existing pedestrian facilities and should not create any new safety problems for pedestrians in the area. The Modified Project is proposing to construct a traffic signal on Stenmark Drive at the Dutra Materials access road, which would improve the Bay Trail with a controlled crossing. This crossing could eventually replace the uncontrolled crosswalk on Stenmark Drive located closer to the I-580 freeway ramps.

As discussed in **Section 3.4.3.3**, the Modified Project would construct a segment of the Bay Trail, as analyzed in the 2018 Bay Trail IS/MND. The Bay Trail will be situated along the western margin of the Project Site, providing unobstructed views of the Bay. The Bay Trail will provide bicycle and pedestrian access from I-580 to Stenmark Drive and around San Pablo Point to the San Pablo Yacht Harbor.

The Modified Project and Bay Trail Extension project would add pedestrians and bicyclists in the area but the volumes added would not be expected to significantly impact any existing pedestrian or bicycle facilities. In relation to the existing conditions, the Modified Project would improve the pedestrian or bicycle conditions in the area by providing new pedestrian and bicycle facilities where none are currently provided and would not significantly impact or require changes to the design of any existing or planned bicycle or pedestrian facilities, including the Bay Trail Extension. Implementation of the Modified Project would support the established goals and policies of the Richmond Bicycle Master Plan and Richmond Pedestrian Plan by expanding and improving the City’s bicycle and pedestrian network. Therefore, the Modified Project would have a beneficial impact on pedestrian and bicycle facilities.

IMPACT 4.13.7	SUBSTANTIALLY INCREASE HAZARDS DUE TO A GEOMETRIC DESIGN FEATURE (E.G., SHARP CURVES OR DANGEROUS INTERSECTIONS) OR INCOMPATIBLE USES (E.G., FARM EQUIPMENT)
Significance Before Mitigation	Less Than Significant
Mitigation Measures	None Required
Significance After Mitigation	Not Applicable
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

Five years of California Highway Patrol accident records were evaluated for Stenmark Drive to verify there were no existing safety problems. This data is included in the technical appendix of **Appendix D**. The Modified Project proposes to provide sufficient pedestrian pathways and signage within the Project Site and along Stenmark Drive between the Project Site and the Bay Trail to ensure the current level of pedestrian safety is maintained. Although the Modified Project would increase vehicle and pedestrian traffic in the Modified Project vicinity, the Modified Project would also make roadway improvements and add sidewalks, pedestrian crossings, and bicycle paths. Based on a review of the Project Site plan and design features, Abrams Associates (**Appendix D**) determined that the Project Site circulation should function well and would not create any new safety problems in the area. The Project Site design would be required to conform to City design standards, which are created to ensure roadway safety for all users, and thus would not create any significant impacts to pedestrians, bicyclists, or traffic operations. Additionally, all proposed improvements, including the widening and realignment of Stenmark Drive and mitigation measures, would be developed according to jurisdictional standards to ensure adequate sight distances and safe operations. Therefore, the Modified Project impacts on transportation safety would be less than significant and no mitigation has been identified.

Construction of the Bay Trail

Impacts as a result of the construction and implementation of the Bay Trail are analyzed within the San Francisco Bay Trail at Point Molate IS/MND, which is incorporated by reference, as described within **Section 1.4.4**. The Bay Trail IS/MND determined that impacts from the construction of the Bay Trail substantially increasing hazards due to a design feature or incompatible uses were less than significant because the Bay Trail would be fenced in some areas to prevent access to adjacent industrial uses. In addition, warning and traffic safety signs would be provided along the Bay Trail to promote safety for trail users. Furthermore, the trail would be constructed in compliance with ADA standards. As a result, construction of the Bay Trail as a component of the Modified Project would not result in substantially increasing hazards due to design features or incompatible uses, and the impact is less than significant.

IMPACT 4.13.8	RESULT IN INADEQUATE EMERGENCY ACCESS
Significance Before Mitigation	Significant
Mitigation Measures	Modified Project Mitigation: MM 4.7-1; MM 4.13-5
Significance After Mitigation	Less Than Significant
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

Sufficient emergency access is determined by factors such as number of access points, roadway width, and proximity to fire stations. As described in **Section 3.4**, the Modified Project includes construction of an on-site fire station, which would be the primary responder to emergencies onsite. In the case of large emergencies, off-site emergency responders would access the Project Site via Stenmark Drive, which is proposed to be widened as part of the Modified Project to accommodate a 12-foot vehicle travel lane, 5-foot bicycle lanes in each travel direction, and a 5-foot sidewalk along the western alignment of Stenmark Drive (see **Section 3.4.3.1**). The widening of Stenmark Drive would ensure that emergency vehicles have unimpeded access to the Project Site and Point San Pablo in the event of traffic congestion on the two-lane segment of Stenmark Drive. All lane widths within the Modified Project would meet the minimum width that can accommodate an emergency vehicle; therefore, the width of the internal roadways would be adequate. Additionally, implementation of **Mitigation Measure 4.7-1** would require the development of a site-specific Emergency Response Plan to ensure safe evacuation of the Project Site during an emergency in a manner that does not interfere with existing evacuation plans. Therefore, the addition of Modified Project traffic would not result in any significant changes to emergency vehicle response times in the area (**Appendix D**).

Construction activities along Stenmark Drive may create delays, stoppages, and detours in construction area zones. Primary impacts from construction-related activities would include short-term and intermittent lessening of roadway and intersection capacities near the Project Site. Most construction-related activities would occur throughout the daytime. Construction-related activities that occur during weekday peak hour could impede traffic flow. The delays, stoppages, and detours of traffic, which could result from construction activities, could impact emergency access to the Project Site and Point San Pablo. Although these disruptions would only occur temporarily, even a temporary disruption of emergency access could result in a significant impact due to the time-sensitive needs and critical public services provided by emergency service providers. However, the implementation of **Mitigation Measure 4.13-5** would result in adequate emergency access to Stenmark Drive by coordinating construction with emergency service providers at least one month in advance, and would reduce the potential impact to a less-than-significant level.

Construction of the Bay Trail

Impacts as a result of the construction and implementation of the Bay Trail are analyzed within the Bay Trail IS/MND, which is incorporated by reference, as described within **Section 1.4.4**. The Bay Trail IS/MND determined that impacts from the construction of the Bay Trail resulting in inadequate emergency

access were less than significant because the Bay Trail would not be located on a public roadway and therefore would not affect emergency response. In addition, the Bay Trail would not require closure of travel lanes that could impede circulation of emergency vehicles along Stenmark Drive. As a result, construction of the Bay Trail as a component of the Modified Project would not result in inadequate emergency access, and the impact would be less than significant.

4.13.5.5 Cumulative Impacts

IMPACT 4.13.9	CONFLICT WITH PROGRAM, PLAN, ORDINANCE, OR POLICY ADDRESSING ROADWAYS DURING OPERATION ASSUMING CUMULATIVE PLUS PROJECT CONDITIONS
Significance Before Mitigation	Potentially Significant
Mitigation Measures	Modified Project Mitigation: MM 4.13-1 (a); MM 4.13-1 (b); MM 4.13-1 (c); MM 4.13-1 (d); MM 4.13-1 (e); MM 4.13-2
Significance After Mitigation	Significant and Unavoidable
Comparison with 2011 FEIR	New Significant Impact

Table 4.13-10 summarizes the LOS results for the cumulative plus project (Year 2040) traffic conditions at each of the Modified Project study intersections. Figure 12 of the TIA (**Appendix D**) presents the cumulative build-out traffic volumes including traffic from the Modified Project.

TABLE 4.13-10
CUMULATIVE PLUS PROJECT INTERSECTION LEVEL OF SERVICE CONDITIONS

Intersection		Control	Peak Hour	Cumulative		Cumulative Plus Project	
				Delay	LOS	Delay	LOS
1	Castro Street & I-580 WB Off-Ramps/Chevron®	Signalized	AM	14.1	B	14.5	B
			PM	> 80.0	F	> 80.0	F
2	Marine Street & I-580 EB Ramps	Signalized	AM	2.1	A	1.8	A
			PM	1.7	A	49.3	D
3	Canal Boulevard & I-580 WB Ramps	Signalized	AM	11.1	B	11.3	B
			PM	24.3	C	28.0	C
4	Canal Boulevard & I-580 EB Ramps	Signalized	AM	17.2	B	20.3	C
			PM	17.0	B	18.2	B
5	I-580 WB Ramps & Cutting Boulevard	Signalized	AM	5.1	A	5.1	A
			PM	4.7	A	4.7	A
6	I-580 EB Off-Ramp/Hoffman Boulevard & Cutting Boulevard	Signalized	AM	9.0	A	9.2	A
			PM	8.7	A	8.8	A
7	Harbour Way South & I-580 WB Off-Ramp	Side Street Stop	AM	13.1	B	13.3	B
			PM	30.6	D	32.4	D
8	Harbour Way South & Cutting Boulevard	Signalized	AM	31.1	C	32.2	C
			PM	30.1	C	31.2	C

Intersection		Control	Peak Hour	Cumulative		Cumulative Plus Project	
				Delay	LOS	Delay	LOS
9	Marina Bay Parkway & I-580 WB Ramps	Signalized	AM	6.8	A	6.8	A
			PM	7.9	A	8.0	A
10	Marina Bay Parkway & I-580 EB Ramps	Signalized	AM	10.1	B	10.3	B
			PM	7.2	A	7.6	A
11	Marina Bay Parkway & Cutting Boulevard	Signalized	AM	28.0	C	28.7	C
			PM	32.2	C	34.6	C
12	I-580 WB Ramps & Juliga Woods Street	Side Street Stop	AM	12.9	B	13.3	B
			PM	16.0	C	17.0	C
13	Regatta Boulevard & I-580 EB Off-Ramp	Signalized	AM	31.6	C	32.8	C
			PM	10.1	B	10.1	B
14	Carlson Boulevard & Cutting Boulevard	Signalized	AM	28.7	C	29.2	C
			PM	15.7	B	15.8	B
15	South 49th Street & Cutting Boulevard	Signalized	AM	39.7	D	39.8	D
			PM	19.6	B	20.1	C
16	I-80 WB Off-Ramp & Cutting Boulevard	Signalized	AM	12.4	B	12.6	B
			PM	10.3	B	10.4	B
17	Harbour Way & Macdonald Avenue	Signalized	AM	24.9	C	25.5	C
			PM	28.4	C	29.3	C
18	Richmond Parkway & Macdonald Avenue	Signalized	AM	10.9	B	11.1	B
			PM	13.0	B	15.0	B
19	Richmond Parkway & Barrett Avenue	Signalized	AM	10.7	B	10.8	B
			PM	17.7	B	20.1	C
20	Richmond Parkway & Hensley Street	Signalized	AM	5.7	A	5.6	A
			PM	5.6	A	6.5	A
21	Richmond Parkway & West Gertrude Avenue	Signalized	AM	39.3	D	47.1	D
			PM	> 80.0	F	> 80.0	F
22	Richmond Parkway & Parr Boulevard	Signalized	AM	54.6	D	65.2	E
			PM	66.1	E	77.9	E
23	Richmond Parkway & San Pablo Avenue	Signalized	AM	> 80.0	F	> 80.0	F
			PM	66.8	E	69.3	E
24	Blume Drive/I-80 WB Ramps & Richmond Parkway	Signalized	AM	> 80.0	F	> 80.0	F
			PM	62.0	E	71.3	E
25	Richmond Parkway & I-80 NB/EB Ramps	Signalized	AM	6.3	A	6.3	A
			PM	13.2	B	13.2	B
26	Canal Boulevard & South Garrard Boulevard	Signalized	AM	19.0	B	19.1	B
			PM	25.1	C	28.3	C
27	Stenmark Drive & Dutra Materials	Side Street Stop	AM	10.9	A	20.5	C
			PM	13.0	A	36.8	E
28	Richmond Parkway & Pittsburg Avenue	Signalized	AM	28.4	C	34.7	C
			PM	29.4	C	36.9	D

Intersection		Control	Peak Hour	Cumulative		Cumulative Plus Project	
				Delay	LOS	Delay	LOS
29	Richmond Parkway & Goodrick Avenue	Signalized	AM	34.5	C	43.6	D
			PM	> 80.0	F	> 80.0	F
30	Castro Street & East Standard Avenue	Signalized	AM	1.9	A	1.9	A
			PM	1.8	A	1.8	A
Notes: Delay results are presented in terms of seconds per vehicle. Bolded and shaded values indicate LOS exceeding relevant thresholds. Source: Abrams Associates, 2019.							

As shown in **Table 4.13-10**, all of the signalized study intersections would continue to have acceptable conditions during the weekday AM and PM peak commute hours with the exception of Intersection #1 (Castro Street and the I-580 WB Off-Ramps/Chevron®), Intersection #21 (Richmond Parkway and West Gertrude Avenue), Intersection #22 (Richmond Parkway and Parr Boulevard), Intersection #23 (Richmond Parkway and San Pablo Avenue), Intersection #24 (Blume Drive/I-80 WB Ramps and Richmond Parkway), Intersection #27 (Stenmark Drive and Dutra Materials), and Intersection #29 (Richmond Parkway and Goodrick Avenue), which would all exceed the established LOS D threshold. All of these intersections except Intersection #27 are forecast to continue exceeding the LOS standards regardless of whether the Modified Project is implemented. However, the Modified Project would increase the peak hour volumes by more than one percent at all of these intersections. Therefore, the contribution from the Modified Project to traffic at all six of these intersections would be cumulatively considerable.

Implementation of **Mitigation Measure 4.13-1 (b)** and **Mitigation Measure 4.13-1 (c)** would reduce the impact at Intersection #21 and Intersection #22, respectively, to a less-than-significant level in the cumulative plus project scenario.

Implementation of the Modified Project's proposed improvements to Stenmark Drive, as described in **Section 3.4.3.1**, would reduce the impact at Intersection #27 to a less-than-significant level in the existing plus project scenario.

As discussed above, implementation of **Mitigation Measure 4.13-1 (a)** and **Mitigation Measure 4.13-1 (e)** would reduce the impacts at Intersections #1 and #29, respectively, in the existing plus project scenario. Additionally, implementation of **Mitigation Measure 4.13-1 (d)** and **Mitigation Measure 4.13-2** would reduce the impact at Intersection #23 in the cumulative plus project scenario. However, the impacts at Intersections #1, #23, and #29 would remain significant and unavoidable as they are outside of the jurisdiction of the City. As discussed above, the County has not identified any improvements that would address the LOS operations at Intersection #24, therefore the Modified Project's contribution to traffic at this intersection would remain significant and unavoidable.

IMPACT 4.13.10	CONFLICT WITH PROGRAM, PLAN, ORDINANCE, OR POLICY ADDRESSING CUMULATIVE FREEWAY OPERATIONS
Significance Before Mitigation	Potentially Significant
Mitigation Measures	Modified Project Mitigation: MM 4.13-3
Significance After Mitigation	Significant and Unavoidable
Comparison with 2011 FEIR	New Significant Impact

Freeway Delay

As shown in **Table 4.13-11**, the delay index on I-580 WB during the AM peak hour currently exceeds the MTSO of 2.5 and therefore any increase to the delay index resulting from the Modified Project would be considered a cumulatively considerable impact. The Modified Project would add traffic to I-580 WB during the existing AM peak hour. Therefore, the Modified Project would contribute to a significant cumulative impact on freeway operations. Implementation of **Mitigation Measure 4.13-3** would reduce the above-identified impact by requiring payment of traffic impact fees to fund regional freeway system improvements, including the I-580 improvements required to reduce the Modified Project's cumulatively considerable contribution to this significant cumulative impact. However, as described for **Impact 4.13.3**, these improvements would not reduce the impacts to a less-than-significant level. Because the Modified Project Applicant and the City do not control the funding, prioritization, and/or construction of improvement projects funded by this fee, this impact would remain cumulatively considerable.

TABLE 4.13-11
CUMULATIVE INTERSTATE 580 FREEWAY DELAY INDEX CALCULATION

Scenario	Direction	MTSO	Without Project	With Project
Cumulative AM Peak Hour (2040)	Eastbound	2.5	1.8	1.9
	Westbound	2.5	4.5	4.7
Cumulative PM Peak Hour (2040)	Eastbound	2.5	1.3	1.3
	Westbound	2.5	1.4	1.5
Source: Abrams Associates, 2019 (Appendix D).				

IMPACT 4.13.11	CONFLICT WITH PROGRAM, PLAN, ORDINANCE, OR POLICY ADDRESSING TRANSIT, BICYCLE, OR PEDESTRIAN FACILITIES DURING OPERATION ASSUMING CUMULATIVE PLUS PROJECT CONDITIONS
Significance Before Mitigation	Less Than Significant
Mitigation Measures	None Required
Significance After Mitigation	Not Applicable
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

The Modified Project would not be expected to result in any new significant impacts to transit, bicycle, or pedestrian facilities in the cumulative year 2040. As described in **Impact 4.13.5**, the Modified Project would help support regional transit ridership by providing shuttle service to BART and expanding ferry service to the Project Site. Potential impacts associated with capacity would be offset by a proportional increase in fare revenue. Therefore, the Modified Project would not be expected to result in any significant impacts to transit service in the cumulative year 2040. As described in **Impact 4.13.6**, the Modified Project would improve the pedestrian or bicycle conditions in the area by providing new pedestrian and bicycle facilities. Therefore, the Modified Project would have a less-than-cumulatively considerable impact on pedestrian and bicycle facilities in the cumulative year 2040.

IMPACT 4.13.12	SUBSTANTIALLY INCREASE HAZARDS DUE TO A GEOMETRIC DESIGN FEATURE (E.G., SHARP CURVES OR DANGEROUS INTERSECTIONS) OR INCOMPATIBLE USES (E.G., FARM EQUIPMENT) UNDER CUMULATIVE PLUS PROJECT CONDITIONS
Significance Before Mitigation	Less Than Significant
Mitigation Measures	None Required
Significance After Mitigation	Not Applicable
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

The Modified Project would not substantially increase hazards due to geometric design features or incompatible uses in the cumulative year 2040. As discussed in **Impact 4.13.7**, all Project Site design features would conform to jurisdictional standards to ensure roadway safety for all users, and thus would not create any significant impacts to pedestrians, bicyclists, or traffic operations. This impact would be less than cumulatively considerable.

IMPACT 4.13.13	RESULT IN INADEQUATE EMERGENCY ACCESS UNDER CUMULATIVE PLUS PROJECT CONDITIONS
Significance Before Mitigation	Potentially Significant
Mitigation Measures	Modified Project Mitigation: MM 4.7-1
Significance After Mitigation	Less Than Significant
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

The Modified Project would not result in inadequate emergency access in the cumulative year 2040. At such time, all construction activities would be completed and the widening of Stenmark Drive, as discussed in **Section 3.4.3.1** and **Impact 4.13.8**, would ensure that emergency vehicles have unimpeded access to the Project Site and Point San Pablo at all times. Additionally, **Mitigation Measure 4.7-1**, described in Section 4.7, would require the development of a site-specific Emergency Response Plan to ensure safe evacuation of the Project Site during an emergency in a manner that does not interfere with existing evacuation plans. This impact would be less than cumulatively considerable.

4.13.6 MITIGATION MEASURES

This section includes mitigation measures that reduce environmental impacts of the Modified Project. Mitigation measures that were identified in the 2011 FEIR have been presented again as appropriate; however, review of the mitigation measures identified in the 2011 FEIR determined that some measures required revisions or were not applicable to the Modified Project. **Appendix K** provides a summary of whether each mitigation measure from the 2011 FEIR was revised, deleted, or kept as is and the reasoning for that determination.

MM 4.13-1 Impacts to Intersection Operations: Prior to issuance of occupancy permits, the Modified Project shall mitigate the above-identified impacts by fully funding or implementing the following improvements. Alternatively, if the City implements any of these improvements prior to issuance of occupancy permits for the Modified Project, the improvement would not be required to be implemented and the City may collect fair-share contributions from the Modified Project to support implementation.

MM 4.13-1 (a) **Castro Street and the I-580 WB Ramps/Chevron® Entrance (Intersection #1 - Existing Plus Project):** 1) Installation of a dual SB left turn lane on Castro Street and 2) installation of a third NB through lane on Castro Street.

MM 4.13-1 (b) **Richmond Parkway and West Gertrude Avenue (Intersection #21 – Cumulative Plus Project):** Conversion of the NB exclusive right turn lane to a shared through-right lane.

- MM 4.13-1 (c)** **Richmond Parkway and Parr Boulevard (Intersection #22 – Cumulative Plus Project)**: Conversion of the NB and SB exclusive right turn lanes to shared through-right lanes.
- MM 4.13-1 (d)** **Richmond Parkway and San Pablo Avenue (Intersection #23 – Cumulative Plus Project)**: Restriping of NB San Pablo Avenue from the Richmond Parkway to Crestwood Drive to provide three through lanes and an associated modification of the traffic signal at Kay Road to accommodate the detectors required for the additional NB through lane that would be added at this intersection.
- MM 4.13-1 (e)** **Richmond Parkway and Goodrick Avenue (Intersection #29 – All Plus Project Scenarios)**: Conversion of the EB exclusive right turn lane to a shared through-right lane.

MM 4.13-2 Impacts to Intersection Operations: Prior to issuance of occupancy permits, the Modified Project shall mitigate the above-identified impacts by paying the required traffic impact fees toward the improvements described below, subject to City approval.

Richmond Parkway and San Pablo Avenue (Intersection #23 – Cumulative Plus Project):

Construction of the planned San Pablo Avenue interchange as set forth in the West County Action Plan. As a mitigation, the Modified Project would pay the West County Subregional Transportation Mitigation Program (STMP) Development Fees.

MM 4.13-3 Impacts to Freeway Operations: Prior to issuance of occupancy permits, the Modified Project shall mitigate the above-identified impacts by paying the required traffic impact fees described below, subject to City approval.

Payment of the Regional Transportation Development Impact Mitigation Fee: The Modified Project would pay the West County STMP development fees to fund regional freeway system improvements including I-580 improvements.

MM 4.13-4 Impacts from Special Event Traffic: To ensure that the maximum additional peak hour traffic at the I-580 interchange with Stenmark Drive does not exceed 800 vehicles, any event with a potential attendance of 3,000 people or more would be required to prepare a detailed Traffic Monitoring and Management Program, subject to City approval that could include the following measures.

1. Off-Site Parking with Shuttle Service
2. Traffic Control Office Deployment
3. On-Street Parking Restrictions
4. Roadway Closures
5. Restricted Access/Bus Priority Streets
6. Event Signage Including Directional and/or Detour Signs
7. Media Announcements of Potential Traffic Restrictions and Shuttle Service Options
8. Marketing campaign to encourage transit use and bicycle use to special events

9. Public information on events for commuters, businesses, and deliveries

MM 4.13-5 Impacts to Emergency Access During Construction: The Applicant shall coordinate all construction activities that would affect traffic flow on Stenmark Drive with local emergency service providers at least two weeks in advance of construction. Emergency service providers shall be notified of the timing, location, and duration of construction activities. All roads shall remain passable to emergency service vehicles at all times. Stenmark Drive shall remain passable to through traffic 24 hours a day, seven days a week to provide access to and from other land uses located on the San Pablo Peninsula. In the event that portions of Stenmark Drive must be closed temporarily, reasonable detours shall be provided such that access to the San Pablo Yacht Harbor and other adjacent land uses is not restricted.

MM 4.13-6 Transportation Demand Management Program: In addition to the TDM measures incorporated into the Modified Project design (**Section 3.4.3.4**), the Applicant shall implement the following strategies to reduce vehicle trips generated by the Modified Project.

1. **BART Shuttle** – The Modified Project shall include a frequent (20-minute headways) direct weekday shuttle service between the Project Site and the Richmond BART Station for two hours during both the peak morning and evening commute periods. This service could be operated by a private contractor or by AC Transit. Shuttles shall be electric and fully accessible to passengers using wheelchairs and other mobility services and should have the capacity to transport bicycles. It is also recommended the Modified Project explore providing a real-time smart-phone app that tracks real-time arrivals to make shuttle use more reliable and convenient.
2. **Guaranteed Ride Home** – The Modified Project shall include a guaranteed ride home program which would provide employees and commuters who rideshare to work with a reimbursed ride home in the event of unexpected circumstances.
3. **Preferential Parking for Carpoolers** – The building management shall offer free or discounted preferential carpool parking for eligible commuters. To be eligible for carpool parking, the carpool shall consist of three or more people. The building management shall monitor and provide adequate carpool spaces to meet and exceed potential demand.
4. **Preferential Parking for Vanpools** – The building management shall offer free or discounted preferential vanpool parking for eligible commuters. The building management shall monitor and provide adequate carpool spaces to meet and exceed potential demand.
5. **Commute Center** – The Modified Project shall provide a commute information center that may include an information board or kiosk located in a common gathering area. The kiosk will contain transportation information, such as Emergency Ride Home, transit schedules, bike maps, and 511 ride-matching.
6. **Bi-Annual Employee Transportation Surveys** – The Modified Project shall conduct surveys to determine the transportation and travel characteristics of the employees working onsite. The goal of the survey would be to identify the best practices for shifting employees to alternative transportation or high occupancy vehicle modes.
7. **On-Site Amenities** – The Modified Project shall provide a minimum of three trip reducing on-site amenities. Typical features could include: banks, grocery stores, clothes cleaners, exercise facilities, child care center, etc. The goal of the Modified Project would be to provide as many of these amenities as is feasible.

4.14 UTILITIES AND SERVICE SYSTEMS

4.14.1 INTRODUCTION

This section provides a description of utilities and service systems in the vicinity of the Point Molate Site (Project Site) and describes the changes to those facilities that would result from implementation of the Point Molate Mixed-Use Development Project (Modified Project). Following an overview of the relevant regulatory setting in **Section 4.14.2** and the environmental setting in **Section 4.14.3**, Modified Project-related impacts and identified mitigation measures are presented in **Section 4.14.5** and **Section 4.14.6**, respectively. The utilities impacts associated with the Casino Project and analyzed as Alternative A in the *Final Environmental Impact Report for the Point Molate Mixed-Use Tribal Destination Resort and Casino Project* (2011 FEIR) are also summarized in **Section 4.14.4** and compared to the impacts of the Modified Project.

4.14.2 REGULATORY SETTING

4.14.2.1 Water

Safe Drinking Water Act

The Safe Drinking Water Act, established by the U.S. Environmental Protection Agency on December 16, 1974, is the primary federal law that ensures the quality of drinking water by setting standards for drinking water quality and by providing guidance to the states, localities, and water suppliers who implement those standards. National Primary Drinking Water Regulations protect public health by limiting the levels of contaminants in drinking water, and are legally enforceable standards that apply to public water systems. National Secondary Drinking Water Regulations (NSDWR) are non-enforceable guidelines that regulate contaminants that could cause cosmetic or aesthetic effects in drinking water; while NSDWRs are not federally required, many states choose to adopt them as enforceable standards. California provides regulations for secondary maximum contaminant levels based on the NSDWRs.

Senate Bill 610 and Senate Bill 221

The purpose and legislative intent of Senate Bill (SB) 610 and SB 221 is to preclude projects from being approved without specific evaluations being performed and documented by the local water provider to indicate whether water is available to serve a project. SB 610 primarily affects the California Water Code, and SB 221 principally applies to the Subdivision Map Act. SB 610 requires the preparation of a Water Supply Assessment (WSA) for large-scale development projects.¹ A WSA evaluates the water supply available for new development based on anticipated demand. For the broad range of projects that are

¹ All projects that meet any of the following criteria require a WSA: 1) a proposed residential development of more than 500 dwelling units; 2) a proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet (sq. ft.) of floor space; 3) a proposed commercial office building employing more than 1,000 persons or having more than 250,000 sq. ft. of floor space; 4) a proposed hotel or motel, or both, having more than 500 rooms; 5) a proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 sq. ft. of floor area; 6) a mixed-use project that includes one or more of the projects specified in this subdivision; or 7) a project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.

subject to this law, the statutory WSA must be requested by the Lead Agency from the local water provider at the time the Lead Agency determines that an Environmental Impact Report is required for the project under the California Environmental Quality Act (CEQA). The water agency must then provide the assessment within 90 days (but may request a time extension under certain circumstances). The WSA must include specific information including an identification of existing water supply entitlements and contracts. The governing board of the water agency must approve the assessment at a public hearing.

California Water Code § 10910(h) provides that where a project has been the subject of a WSA, no additional WSA shall be required for subsequent projects within the scope of the project considered in the earlier WSA unless one or more of the following occurs.

1. Changes in the project that result in a substantial increase in water demand for the project
2. Changes in the circumstances or conditions substantially affecting the ability of the public water system to provide a sufficient supply of water for the project
3. Significant new information becomes available which was not known and could not have been known at the time when the assessment was prepared

SB 221 requires the local water provider to provide “written verification” of “sufficient water supplies” to serve a project. Sufficiency under SB 221 differs from SB 610 in that it is determined by considering the availability of water over the past 20 years; the applicability of any urban water shortage contingency analysis prepared per California Water Code § 10632; the reduction in water supply allocated to a specific use by an adopted ordinance; and the amount of water that can be reasonably relied upon from other water supply projects, such as conjunctive use, reclaimed water, water conservation, and water transfer. In most cases, the WSA prepared under SB 610 would meet the requirement for proof of water supply under SB 221.

Senate Bill 7

SB 7 requires submetering in all new construction multi-unit dwellings, so that water usage can be billed based on actual volumetric usage. The goals of SB 7 are to encourage the conservation of water in multi-family residential rental buildings through means within the control of the landlord or tenant, and to establish that the practices involving the submetering of dwelling units for water service are just and reasonable and include appropriate safeguards for both tenants and landlords.

Urban Water Management Planning Act

The Urban Water Management Planning Act (California Water Code §§ 10610-10656), established in 1983, requires urban water suppliers to prepare a management plan of their current and future water sources so as to continue to provide their customers with an adequate and reliable water supply. The Urban Water Management Plan (UWMP) describes the projected uses for all water resources within an agency to meet the goal of managing water supplies for their highest and best uses.

The East Bay Municipal Utilities District (EBMUD) adopted its latest UWMP in 2015 to assess current and projected water usage, water supply planning, water conservation, and recycling programs over a 20-year planning horizon. The UWMP sets minimum performance goals for water supply in the service area including reliability, flexibility, and the minimization of water rationing. Water demand projections from the

EBMUD account for anticipated future water demands within EBMUD service boundaries and for variations in demand-attributed changes in development patterns.

Water Supply Management Program 2040

On April 24, 2012, the EBMUD adopted the Water Supply Management Program 2040 (WSMP). The WSMP is a program-level effort that estimates the dry-year water supply needs of EBMUD through 2040, and proposes a diverse portfolio of policy initiatives and potential projects to ensure that those needs can be met in dry years. The EBMUD has developed mitigation and adaptation strategies to deal with the changing climate and its effects on water resources (EBMUD, 2012).

Water Reuse

Provisions of the California Water Code (§§ 13550-13557) state that the use of potable water for the irrigation of residential landscaping, floor-trap priming, cooling towers, or air-conditioning devices is wasteful and unsound if reclaimed water suitable for these purposes is available. The Water Reuse provisions of the Water Code also give the power to any public agency—including a state agency, city, county, district, or any other political subdivision of the state—to require the use of reclaimed water for these purposes if certain conditions are met. The conditions that must be met include the following.

- Reclaimed water meeting the requirements of existing law is available to the user.
- The use of reclaimed water does not cause any loss or diminution of any existing water right.
- Public health concerns regarding exposure to mist or spray must be addressed, if appropriate.
- The water user must prepare an engineering report pursuant to Title 22 regulations governing the use of reclaimed water.

The requirements of the law are applicable to facilities for which the Department of Health Services has approved the use of reclaimed water, and for which a building permit is issued on or after March 15, 1994; or, if a building permit is not required, new structures for which construction begins on or after this date.

Assembly Bill 901

Assembly Bill (AB) 901 requires UWMPs to address the quality of a supplier's available water source(s) and provide an assessment of the ways in which water quality affects its water management strategies and supply.

Assembly Bill 325

AB 325, the Water Conservation in Landscaping Act, directs local governments to require the use of low-flow plumbing fixtures and the installation of drought-tolerant landscaping in all new development. Pursuant to AB 325, the Department of Water Resources developed a Model Water Efficient Landscape Ordinance.

State Health and Safety Code Section 64562

Section 64562 of the California Health and Safety Code requires each public water system to have sufficient water available from its water sources and distribution reservoirs to adequately, dependably, and safely supply the total requirements of all its users under maximum demand conditions before an agreement can be made to permit additional service connections to that system.

California Water Code Section 10608 et seq. (SB 7 or SB X7-7)

California Water Code § 10608 requires urban retail water suppliers to set and achieve water use targets that will help the State achieve a 20 percent per capita urban water use reduction by the year 2020.

California Green Building Standards Code

The California Green Building Standards Code (CALGreen) provides mandatory water efficiency and conservation measures for residential and non-residential infrastructure including regulations for water used indoors, outdoors, and in wastewater conveyance.

East Bay Municipal Utilities District Water Efficiency Requirements

EBMUD Regulations § 31 requires the EBMUD to review applications for new water service to determine the applicability of, and compliance with, water-efficiency requirements. EBMUD staff may inspect the installation of water efficiency measures and fixtures to verify that the items are installed and performing to the required water use levels. Among other requirements, residential service includes high-efficiency or dual-flush toilets, dishwashers, and clothes washing machines, as well as low-flow showerheads and faucets. Outdoor landscaping plans are required for any new or retrofitted landscaping greater than 5,000 sq. ft. of irrigated area, and ornamental turf must be limited to no more than 25 percent of total irrigated area. Additionally, EBMUD Policy 9.05 requires that customers use non-potable water, including recycled water, for non-domestic purposes when it is reasonably available.

City of Richmond General Plan

The City of Richmond's (City) General Plan 2030 (General Plan) identifies multiple policies regarding water utilities. A summary of consistency of the Modified Project with the General Plan is included as **Appendix L**.

GOAL CF1 Facilities that Serve a Diverse Range of Community Needs. The City seeks to provide a broad range of high-quality facilities and infrastructure to serve a diverse range of community needs. Facilities should be universally accessible and appropriately programmed to meet community needs. Infrastructure should be maintained and expanded to meet current and future needs and to provide effective, equitable, and consistent levels of service to all neighborhoods.

Policy CF1.4 Concurrent Infrastructure Development. Require new development to provide proportionate facilities and infrastructure improvements as it occurs. New developments must mitigate impacts or contribute adequate infrastructure to meet additional demand for roads, parks, schools, and utilities.

GOAL EC3 Sustainable and Efficient Energy Systems. Reduce consumption of energy in the City by encouraging energy conservation, and supporting the consumption of energy produced by climate-friendly technologies. Reduce the overall waste stream of the City by reducing the City's consumption of goods and materials, and by adopting a zero-waste philosophy.

Policy EC3.4 Water Conservation and Reuse. Promote water conservation and recycled water use. Reduce energy consumed for treatment and transportation of water and discharge of wastewater by: encouraging installation of low-flow fixtures; using native planting for landscaping in all City-owned and operated facilities; promoting best practices and technologies for water conservation; considering water use in evaluating and approving development projects; supporting the use of greywater and water catchment systems in residential, commercial, and industrial uses; and encouraging new development and redevelopment projects to meet a portion of their water needs through the use of recycled water.

GOAL CN3 Improved Water Quality. Pursue a multi-jurisdictional approach to protecting, maintaining, and improving water quality and the overall health of the watershed. A comprehensive, integrated approach will ensure compliance with federal and State standards, and address a range of interconnected priorities including: water quality and runoff; stormwater capture, storage and flood management techniques that focus on natural drainage; natural filtration and groundwater recharge through green infrastructure and habitat restoration; and water recycling and conservation.

Policy CN3.4 Water Conservation. Encourage residents, public facilities, businesses, and industry to conserve water especially during drought years. Work with the EBMUD to advance water recycling programs including using treated wastewater to irrigate parks, golf courses, and roadway landscaping and by encouraging rainwater catchment and greywater usage techniques in buildings.

City of Richmond Green Building Standards

Chapter 6.46 of the City's Municipal Code (RMC), titled "Commercial and Residential Green Building Standards," requires that application materials for all projects subject to discretionary planning entitlement must include the completed Green Building Checklist appropriate to the covered project type (commercial, single-family, multi-family, mixed-use) demonstrating compliance with the minimum achievement thresholds set for the covered project tier. The checklist provides flexibility for project sponsors to meet the applicable rating by choosing among several energy-efficiency, water-use-reduction, and waste-reduction methods.

2016 California Fire Code

In accordance with the 2016 California Fire Code and Chapter 8.16 of the RMC, potable water systems must be designed to deliver maximum daily demand coincident with the required fire flow while maintaining at least a 20 pounds per square inch of residual.

4.14.2.2 Wastewater and Stormwater Collection and Treatment

National Pollutant Discharge Elimination System

Federal and State laws relating to wastewater primarily focus on the regulation of pollutant discharges that could contaminate surface waters or groundwater. As such, the federal Clean Water Act (CWA) and the National Pollutant Discharge Elimination System (NPDES), as well as the State Porter-Cologne Water Quality Control Act, all regulate wastewater treatment and the discharge of treated effluent (see **Section 4.8.2**). NPDES permit number CA0038539 (Order No. R2-2019-0003) sets the discharge requirements for the area comprising the West County Agency, West County Wastewater District (WCWD), the City, and the Richmond Municipal Sewer District (RMSD). The current order is effective through March 2024, and permits dry weather flows from the RMSD plant of up to 16 million gallons per day (mgd), and wet weather design flows up to 20 mgd (San Francisco Bay Regional Water Quality Control Board [SFBRWQCB], 2019e).

City of Richmond Municipal Sewer District

The RMSD is the primary wastewater provider for the City. In November 2011, the RMSD completed a Sewer Collection System Master Plan for the City. The primary purpose of the Plan was to evaluate the gravity sewer collection system in the City under a specific design storm, using a computerized hydraulic model, to determine whether the system can convey flows without sewer system overflows (SSO). Where SSOs are predicted, the Sewer Collection System Master Plan provides recommended solutions. In August 2013, the RMSD drafted the Sewer System Management Plan to comply with the Regional Water Quality Control Board (RWQCB) Sewer System Master Plan Guidelines and Statewide Water Discharge Requirements.

City of Richmond Storm Drain Master Plan and Green Infrastructure Plan

The City is classified as a small, separate storm sewer system (MS4) regulated entity under the Phase II NPDES Program. Under the Phase II Small MS4 Program requirements, the City is required to: 1) implement a program to eliminate, reduce, or improve the conditions of direct discharges of stormwater to the maximum extent practicable; 2) protect water quality of the San Francisco Bay (Bay); and 3) fulfill the requirements of the CWA. The City prepared a Storm Drain Master Plan in 2018 to assess the existing storm drainage system within the City, determine system deficiencies, recommend improvements, and identify facilities and costs for expansion (City of Richmond, 2018c). The 2019 Green Infrastructure Plan for the City, which guides the shift to resilient and sustainable stormwater management, identifies the Project Site as a future private development project which may incorporate green infrastructure (City of Richmond, 2019e).

City of Richmond Sewer Collection System Master Plan

The Sewer Collection System Master Plan was prepared in 2011 to provide a critical assessment of sewer treatment and collection infrastructure and facilities within the City. The planning area of approximately 13.2 square miles does not include areas served by the WCWD or Stege Sanitary District. The Sewer Collection System Master Plan assesses the existing and future sewer flows within the City, evaluates the capacity of the existing system for current and future conditions, recommends system improvements, identifies design criteria for future improvements, and includes a capital improvement program (City of Richmond, 2011a).

EBMUD Recycled Water Master Plan

EBMUD's Recycled Water Master Plan is designed to guide future projects and priorities with a goal of serving 20 mgd of recycled water by 2040. Recycled water use is a critical element of EBMUD's water supply management policies, as any demand met with recycled water reduces the demand for limited drinking water supplies. EBMUD's recycled water program has grown significantly since its inception to provide more recycled water to a diverse array of customers, including partnerships with other wastewater treatment entities in its water service area.

City of Richmond General Plan

The General Plan identifies the following policy regarding wastewater utilities. A summary of the Modified Project's consistency with the General Plan is included as **Appendix L**.

GOAL CN3 Improved Water Quality. Pursue a multi-jurisdictional approach to protecting, maintaining, and improving water quality and the overall health of the watershed. A comprehensive, integrated approach will ensure compliance with federal and State standards, and address a range of interconnected priorities including: water quality and runoff; stormwater capture, storage, and flood management techniques that focus on natural drainage; natural filtration, and groundwater recharge through green infrastructure and habitat restoration; and water recycling and conservation.

Policy CN3.5 Municipal Sewer System. Continue to modernize wastewater treatment facilities to avoid overflows of untreated sewage.

4.14.2.3 Solid Waste***California Integrated Waste Management Act***

AB 939, the California Integrated Waste Management Act, mandates management of non-hazardous solid waste throughout California. The purpose of AB 939 is to reduce, recycle, and reuse solid waste generated in the State to the maximum extent feasible; improve regulation of existing solid waste landfills; ensure that new solid waste landfills are environmentally sound; streamline permitting procedures for solid waste management facilities; and specify the responsibilities of local governments to develop and implement integrated waste management programs. AB 939 requires every city and county in California to include a Source Reduction and Recycling Element in its Solid Waste Management Plan, which should identify how each jurisdiction will meet the mandatory State waste diversion goals (City of Richmond, 2012). The State generally places the burden of responsibility for waste stream reduction on local municipalities (i.e., cities and counties).

Assembly Bill 341

AB 341 requires commercial businesses and public entities in California that generate four or more cubic yards (cy) per week of waste and multi-family housing complexes with five or more units, to adopt recycling practices.

Assembly Bill 1826

AB 1826 requires businesses in California to recycle their organic waste, depending on the amount of waste generated per week. Organic waste includes food waste, green waste, landscape and pruning waste, non-hazardous wood waste, and food-soiled paper waste.

California Green Building Standards Code

CALGreen requires that at least 50 percent of the weight of non-hazardous job site debris generated by new construction be recycled, reused, or otherwise diverted from landfill disposal. CALGreen requires submission of plans and verifiable post-project documentation to demonstrate compliance.

California Solid Waste Reuse and Recycling Access Act

Subsequent to the California Integrated Waste Management Act, additional legislation was passed to assist local jurisdictions in accomplishing the goals of AB 939. The California Solid Waste Reuse and Recycling Access Act (Public Resources Code §§ 42900-42911) directed the CIWMB to draft a model ordinance relating to adequate areas for collecting and loading recyclable materials in development projects (CalRecycle, 2019a). If by September 1, 1994, a local agency did not adopt its own ordinance based on the CIWMB model, the CIWMB model took effect for that local agency.

The City is a member agency of the West Contra Costa Integrated Waste Management Authority (WCCIWMA), a local Joint Powers Authority responsible for helping its member agencies meet the waste diversion mandate in California. To meet and maintain the 50 percent diversion rate required by CALGreen, Richmond Sanitary Service offers residential and commercial co-mingled recycling collection and green waste collection services throughout its service area.

Joint Solid Waste Management Program

West Contra Costa County (County) cities and unincorporated areas joined together to form the WCCIWMA to address solid waste management. The WCCIWMA supports its member cities in meeting the State waste reduction mandate established by AB 939.

4.14.3 ENVIRONMENTAL SETTING

Information provided in this section is derived from a number of sources including the dry utilities technical memorandum (**Appendix H**), EBMUD water management documents and plans, a Water and Wastewater Master Plan, and an associated technical memorandum (**Appendix E; Appendix U**), the City Storm Drain Master Plan, and publically available landfill permitting information. This analysis focuses on the manner in which development could alter the Project Site under baseline conditions, which are defined for the purposes of the analysis in this section as physical conditions on or around the publication of the Notice of Preparation (NOP) in July 2019.

4.14.3.1 Stormwater

As described in **Section 3.2.4.2**, the watersheds within the Project Site drain to discharge points in the Bay. The Project Site is not currently served by the City's municipal stormwater system. The existing stormwater system is described in detail in **Section 4.8.3**.

4.14.3.2 Municipal Water Supply

The Project Site is within the 332-square mile EBMUD service area, which includes portions of both Alameda County and Contra Costa County. Most of the EBMUD water supply comes from snowmelt and runoff in the Mokelumne River watershed, and a small amount of water supply comes from the local watershed. The distribution system consists of a number of reservoirs, aqueducts, treatment plants, and other distribution facilities that extend from the Mokelumne River Basin, the primary water source located in the Sierra Nevada Mountains. Runoff generated within the Sierra Nevada mountain range feeds the Mokelumne River. Water from the river is stored in the Pardee and Camanche reservoirs. Water from the Pardee Reservoir traverses 91 miles via the Pardee Tunnel and the Mokelumne and Lafayette aqueducts to the East Bay Area and EBMUD water treatment facilities. EBMUD has water rights to divert up to 325 mgd of water from the Mokelumne River, pending the availability of water rights of other users. EBMUD also has a contract with the Bureau of Reclamation for a supplemental water supply from the Sacramento River. EBMUD has rights to up to 100 mgd from the Sacramento River in dry years. When needed, the water is conveyed through the Freeport Regional Water Facility that is jointly owned by EBMUD and Sacramento County (EBMUD, 2019b).

The average water demand of the EBMUD in 1970 reached as high as 220 mgd. Average annual demand dropped sharply as a result of cutbacks during the subsequent drought rationing periods when drought-related programs were in effect in 1976-1977, 1987-1994, and 2007-2010. Demand remained suppressed in years that immediately followed the 1976-1977 and 1987-1994 droughts but eventually recovered to pre-drought levels. These temporary reductions in demand due to drought reflect changed customer water use behaviors, successfully implemented conservation practices, and delayed post-drought recovery in customer demand. As time progressed following the end of the droughts, demand gradually recovered to pre-drought levels. Following the 2007-2010 drought, demand began to rise to pre-drought levels, but was impeded by the emergence of yet another drought and implementation of an EBMUD drought management program in 2014 (EBMUD, 2015). Current summer water demand (September 2019) is approximately 201.2 mgd, with a 7-day average of 200.8 mgd (EBMUD, 2019a).

EBMUD provides potable water to the Project Site through a 12-inch diameter water main along Stenmark Drive, which was installed in 1997. Water is currently distributed to the Project Site via a number of metered connections to the 12-inch EBMUD line. The water is supplied to the Project Site from EBMUD's Richmond and Potrero tanks. Potrero Tank, a 1,000,000-gallon welded steel tank northwest of the Project Site near Point San Pablo, is at the end of EBMUD's Western Drive pipeline. EBMUD had plans to replace the welded steel tank with a 400,000-gallon pre-stressed aboveground concrete tank; however, this plan has not been implemented to date. The 11,400,000-gallon Richmond Tank is south of the Project Site at Point Richmond. Both tanks are part of the Central Pressure Zone. The tanks provide operational, emergency, and fire flow water storage in the Point San Pablo/Point Molate/Interstate 580 (I-580) area (**Appendix E**).

As described in a letter dated December 16, 2019, EBMUD provided a written response to a request from the City for water agency consultation concerning the Point Molate Mixed-Use Tribal Destination Resort and Casino Project on September 10, 2008 (2008 WSA). The 2008 WSA for the Casino Project concluded that water demands for the Casino Project (approximately 864,000 gallons per day [gpd]) were accounted for in EBMUD's water demand projections. The staff report on the 2008 WSA further explained that "The 2005 [Urban Water Management Plan] concludes that [EBMUD] has, and will have, adequate water supplies to serve existing and projected demand within the Ultimate Service Boundary during normal and wet years, but that deficits are projected for drought years." The 2008 WSA was included as Appendix C of the 2011 FEIR.

There are two on-site water storage tanks that were constructed by the Navy. One is a 1,134,000-gallon storage tank (known as Tank A) at an approximate elevation of 500 feet above mean sea level (amsl) on top of a hill on Ridge Road. Tank A is known to leak at 15,000 gallons per day (**Appendix E**). The other tank is a 200,000-gallon underground tank (Tank 66) adjacent to Building No. 66 at an elevation of approximately 100 feet amsl. These tanks are isolated from the piping network by manual isolation valves. Historically, water from the EBMUD pipe was received at Building No. 13 and pumped uphill to Tank A. Water was then redistributed onsite via the U.S. Navy (Navy) private water system, which was comprised of a 14-inch main line and several secondary lines (**Appendix E**). There were two main Navy water distribution systems and four smaller systems.

The main systems were the following.

- A pumped system for fire protection for the higher elevations served by Tank A. The pumps are in various states of disrepair. Because the tanks have not been operated for several years, they cannot be relied upon. The pumps are no longer required as the fuel storage tanks are empty and no longer in service.
- A non-pumped potable water/fire protection system was served by Tank A and Tank 66.

The smaller systems were the following.

- Three potable water systems provided water to the residential units and other areas not covered by the two larger systems. Fire protection for the structures served by the three potable water systems was provided by the gravity flow system from Tank A.
- A combined potable/fire protection system served Drum Lot 2 (Installation Restoration Site 4 in **Figure 3-9**).

4.14.3.3 Wastewater Service

Wastewater service for the City is divided among several districts. Northern areas of the City are in the WCWD. Southern areas of the City are in the RMSD. Areas of the Richmond Annex are in the Stege Sanitation District. The RMSD system comprises 185 miles of sewer and 13 pump stations. RMSD serves a population of approximately 19,608 single- and multi-family residences and commercial/industrial units throughout most of the incorporated area of the City. The RMSD, via an operations contract with Veolia Water North, operates a wastewater treatment plant (WWTP; RMSD Plant), located approximately three

miles south of the Project Site. The RMSD Plant is designed to treat up to 42 million gallons per day of wastewater during wet weather events (**Appendix U**). The RMSD Plant is also equipped with an influent bypass pumping station and 5 million-gallon storage tank. Together, these facilities are designed to receive up to 68 million gallons per day of peak hourly wet weather flow without sanitary sewer overflows. The nearest RMSD collection system pipe line to which the Project Site can connect to is roughly two miles south of the Project Site. When wet weather conditions exceed the secondary treatment capacity of the RMSD Plant due to infiltration into the collection system, excess primary-treated flows are diverted to equalization basins, and blended with secondary-treatment wastewater for disinfection and dechlorination prior to discharge into the Bay (SFBRWQCB, 2019e).

EBMUD operates the Richmond Advanced Recycled Expansion (RARE) Water Project, an industrial water reuse project designed to provide recycled water for use at the Chevron®-Richmond Refinery (EBMUD, 2019d). EBMUD's North Richmond Water Reclamation Plant receives secondary-treated wastewater from nearby program participants and treats it to a tertiary level prior to redirecting the recycled water to the Chevron®-Richmond Refinery. Chevron® uses this recycled water in its boilers to generate steam used while manufacturing gasoline, jet fuel, diesel and lubricants. Only extremely high-purity water can be used in the manufacturing process. To meet these quality requirements, RARE includes microfiltration and reverse osmosis systems, and a variety of pumps, pipes, and equipment. RARE can produce 3.5 mgd of recycled water. **Figure 4.14-1** shows the existing recycled water distribution system under the RARE project.

The Project Site is within the 13.5-square mile service boundary of the RMSD, but is not currently connected to the RMSD wastewater collection system. Wastewater that was generated during Navy operations was collected and treated onsite and discharged to the Bay. The Navy wastewater system was comprised of the sanitary sewer collection system, a wastewater treatment plant (Building No. 125) and appurtenances, including a 10-inch-diameter steel outfall, and two septic tanks with leach fields at Building No. 87 and former Building No. 75.

The Navy's sewer collection system primarily served the Winehaven area, including Building Nos. 1 and 6, the housing units, and the administration area, including Building No. 123, Building No. 132, and the pier. Domestic sewage was collected through a combination of 4-, 6-, 8-, and 12-inch sanitary sewer lines. The approximately 9,000 feet of sewer piping is mainly 70-year-old vitrified clay pipe. Wastewater was collected and transported by gravity to the package sewage treatment plant at Building No. 125. The WWTP had a design capacity of 24,000 gpd and a trickling filter capacity of 20,000 gpd. Treated wastewater was then pumped by an effluent pump station to the 10-inch outfall. A vacuum truck removed solid waste from the septic tanks periodically, and solids were emptied into the WWTP. The aboveground equipment associated with the septic tank at former Building No. 75 has been removed, but the tank itself remains in place. In addition to Building No. 125, Building No. 127 utilized two large sand filters and a chlorination/dechlorination system. Just north of Building No. 127, three aeration ponds were constructed over a former sump pond that was used in the 1940s to contain contaminated fuels, tank bottom sludge, bunker fuel, leaking drums, and other liquid wastes. These ponds were closed in 1975 and the liquids, sludge, and waste were removed. (**Appendix WATER**). Operation of the sanitary sewer system was terminated by the Navy in conjunction with the cessation of fueling operation in 1995, and the sewer pipelines have been plugged and cement capped at manholes. Site remediation efforts were performed as part of the Phase 1 Environmental Site Assessment for Former Point Molate Naval Fuel Depot

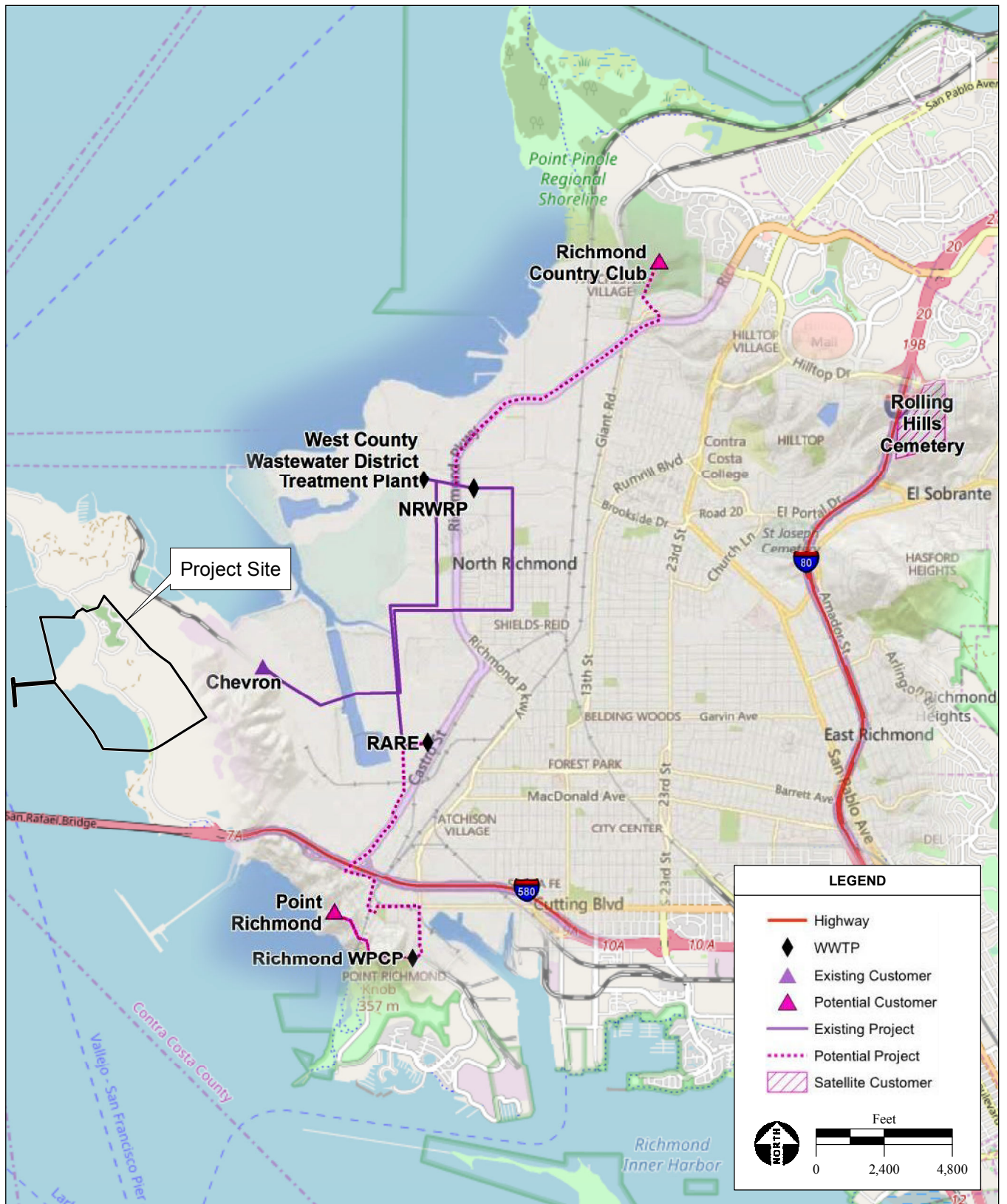


Figure 4.14-1
Existing Recycled Water Distribution System, RARE Water Project

(RWQCB Order No. R2-2011-0087).. These efforts included the removal of Building No. 125, Building No. 127, and three aeration ponds.

There is currently a temporary sanitary trailer at Building No. 123 and the septic tank remains at Building No. 87. Portable toilets are used on the Project Site as needed. Sewage from the Project Site is trucked to the RMSD treatment plant.

4.14.3.4 Solid Waste Service

The WCCIWMA is a joint power agency created to manage solid waste for the cities of El Cerrito, Hercules, Pinole, Richmond, and San Pablo. The WCCIWMA is governed by a Board of Directors made up of seven city council members from the various cities. The WCCIWMA implements programs to increase diversion including source reduction, recycling, composting, special waste material, public education, policy incentive, and facility recovery programs. WCCIWMA is responsible for managing the post-collection agreement for waste processing services of the franchised waste stream in western portions of the County (transfer, landfilling, recyclables processing, composting, and household hazardous waste) and with ensuring that cities in the western portion of the County within the region are in compliance with the California Integrated Waste Management Act of 1989 (AB 939) and more recent State legislation. This is being achieved through the development and implementation of programs that enable its member agencies to meet the State-mandated 50 percent solid waste diversion rule. The State has further established the ultimate goal of 75 percent solid waste diversion by 2020. WCCIWMA achieved a 68 percent diversion rate in 2013 (WCCIWMA, 2019).

The Project Site is within the service collection district of Republic Services. Refuse is collected and taken to a transfer station (Golden Bear Transfer Station), which then transports refuse to the Keller Canyon Landfill. Keller Canyon Landfill is located at 901 Bailey Road in Pittsburg, approximately 30 miles east of the Project Site. The landfill has a permitted capacity of approximately 75 million cy and a permitted daily intake limit of 3,500 tons (CalRecycle, 2019b). With current intake rates, the estimated closure year of the facility is 2050.

4.14.3.5 Electricity, Natural Gas, and Telecommunications

Power to the City is provided by Pacific Gas & Electric (PG&E). Electricity is generated from hydroelectric, fossil fuels, nuclear, solar, and other renewable facilities. PG&E lines enter the Project Site from the south and run along Stenmark Drive to a service connection near Building No. 13, from which power is distributed throughout the Project Site to customers north on Stenmark Drive. Electricity is currently used for street lighting and in Building Nos. 6 and 123 (City of Richmond, 2002). Buildings at the Project Site are no longer heated, but heat was previously provided via boilers and electricity. Heating for the 29 on-site cottages was provided by a heating oil system.

Within the City, broadband service is provided by American Telephone and Telegraph (AT&T) and Comcast. This includes residential and commercial communication facilities consisting of telephone, cable television, and internet. Both networks are composed of copper and fiber-optic cable and are located both overhead and underground approximately 4 miles south of the Project Site. The Modified Project would receive broadband service through extension of and/or upgrades to the existing systems.

4.14.4 2011 FEIR ANALYSIS

This section provides a summary of the impacts to utility conditions analyzed for the Casino Project of the 2011 FEIR, followed by a description of changes since the 2011 FEIR that relate to utilities and service systems.

4.14.4.1 2011 FEIR Summary of Impacts

Impacts

The 2011 FEIR determined that the Casino Project would have resulted in an increased demand on the regional water supply. This was a potentially significant impact. However, a will-serve letter sent by EBMUD (included in Appendix C of the 2011 FEIR) acknowledged the willingness and availability of EBMUD to serve the Project Site if it was compliant with EBMUD regulations and fees. Additionally, an EBMUD Water Supply Assessment for the Project Site included water conservation measures to ensure water supply during dry years; these measures were included as mitigation in Section 5.2.9 of the 2011 FEIR. Therefore, the 2011 FEIR determined this impact would be less than significant.

The Casino Project would not have resulted in the need for upgrades to the water system delivery infrastructure and an increased demand on wastewater collection and treatment services. This was a potentially significant impact. However, under the mitigation measures presented in Section 5.2.9 of the 2011 FEIR, EBMUD would have performed a hydraulic analysis to determine specific upgrades needed to provide adequate water distribution to the Project Site, and implementation of these upgrades would have reduced impacts to the water system delivery infrastructure. Additionally, mitigation measures presented in Section 5.2.9 of the 2011 FEIR would have reduced impacts to wastewater collection to a less-than-significant level.

The 2011 FEIR determined that construction and operation of Casino Project would have resulted in additional demand for solid waste disposal. However, the receiving landfills would have had adequate capacity to serve the project, and solid waste from construction and operation would have complied with federal, State, and local statutes and regulations related to solid waste, including AB 939. Therefore, the Casino Project would have resulted in a less-than-significant impact.

The Casino Project would have resulted in additional demand for electricity, natural gas, and telecommunications services. However, the project included a municipal services agreement that provided provisions for fair-share contributions to the service providers, and a will-serve letter sent by PG&E (included in Appendix C of the 2011 FEIR) acknowledging PG&E's willingness and availability to serve the Project Site. Therefore, the 2011 FEIR determined these impacts would have been less than significant.

Cumulative Impacts

At the time of the 2011 FEIR analysis, the local utility provider, EBMUD, had the capacity to meet the potable water demand with its service area. Therefore, regional development projects in combination with the Casino Project would not have resulted in adverse impacts to the regional water supply or water treatment. The 2011 FEIR determined this cumulative impact would have been less than significant.

The 2011 FEIR determined that the demand for wastewater treatment of City-wide development projects and the Casino Project would have resulted in increased demand on the RMSD WWTP and wastewater collection system. However, the projected demands were estimated to be well within the cumulative capacity of the WWTP through the year 2020, and requirements for share contributions for upgrades to the existing collection system were provided as mitigation in Section 5.2.9 of the 2011 FEIR, and would have reduced potential impacts to less-than-significant levels.

The Casino Project in combination with regional increases in solid waste would have resulted in an increased demand on landfill capacity. However, the projected demands were estimated to be well within the cumulative capacity of the receiving landfills through the year 2040. Therefore, the 2011 FEIR determined that the cumulative impact would have been less than significant.

The Casino Project in combination with other foreseeable projects would not have resulted in cumulatively considerable impacts to electricity, natural gas, and telecommunications services. The Casino Project and development projects within the project vicinity could have been served by the existing PG&E electrical grid and natural gas pipelines, and coordination between PG&E and City and County planners would have ensured that adequate capacity remained available for future development. Therefore, the 2011 FEIR this cumulative impact was determined to be less than significant.

4.14.4.2 Changes Since the 2011 FEIR

Since the 2011 FEIR, the circumstances described below have been analyzed for changes that would be created by implementation of the Modified Project.

The 2011 FEIR stated that the General Plan was in the process of being updated, but no information was publicly available regarding utilities resources. In 2012, the City Council adopted the updated General Plan, which includes several elements regarding utilities, such as the Community Facilities and Infrastructure Element, the Conservation and Natural Resources Element, and the Energy and Climate Change Element. The analysis below is based on the updated General Plan.

The CEQA Guidelines have been updated and the analysis below addresses those updates. Specifically, the impact criteria regarding water supply and wastewater services were reworded, but consist of the same concerns as the previous criteria. Therefore, the analysis below was not impacted by the minor language changes included in the updated CEQA Guidelines.

At the time of the 2011 FEIR, solid waste was analyzed for processing and disposal at the Potrero Hills Landfill. The receiving landfill for solid waste resulting from the Modified Project would now be the Keller Canyon Landfill.

The analysis below describes potential impacts to the RMSD WWTP and wastewater collection system based on existing conditions, which differ from the conditions that were analyzed in the 2011 FEIR. The RMSD WWTP has undergone a substantial number of capital improvement projects since 2011, including, but not limited to, a tank replacement, a wet weather storage project, electrical system upgrades, grit and aeration design upgrades, a yard expansion project, clarifier improvements (Veolia, 2019).

4.14.5 IMPACTS

4.14.5.1 Thresholds of Significance

Criteria for determining the significance of impacts to utilities have been developed based on Appendix G of the CEQA Guidelines and relevant agency thresholds. Impacts associated with utilities would be considered significant if the Modified Project would:

- require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects;
- [not] have sufficient water supplies available to serve the Modified Project and reasonably foreseeable future development during normal, dry, and multiple dry years;
- result in a determination by the wastewater treatment provider, which serves or may serve the Modified Project that it [does not have] adequate capacity to serve the projected demand of the Modified Project in addition to the provider's existing commitments;
- generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals; or
- [not] comply with federal, State, and local management and reduction statutes and regulations related to solid waste.

4.14.5.2 Method of Analysis

This section identifies any impacts to utilities that could occur from construction and operation of the Modified Project. Impacts to utilities were analyzed based on an examination of the Project Site, published information regarding utility systems existing capacities, and technical studies prepared to analyze utilities under the Modified Project. Technical studies are cited throughout this Draft Supplemental Environmental Impact Report (SEIR) and are included as appendices. This analysis focuses on the manner in which development of the Modified Project could alter utilities that exist in or near the Project Site under baseline conditions, which are defined for the purposes of the analysis in this section as the physical conditions in the vicinity of the study area on or around the publication of the NOP in July 2019. The analysis below discusses the impacts of the Modified Project option (either Option 1 or Option 2) that would be the most impactful. The water and wastewater analyses and the solid waste analysis is based on Option 1 (Residential-Heavy Scenario). The electricity, natural gas, and telecommunications analysis is based on Option 2 (Commercial-Heavy Scenario). Where it was concluded that impacts to utilities resulting from a the Modified Project would exceed the significance thresholds listed below, mitigation measures have been identified to reduce impacts to less-than-significant levels.

4.14.5.3 Effects Found Not to be Significant Without Further Analysis

Review and comparison of the existing setting conditions and the Modified Project characteristics with the significance criteria clearly show that no impacts would be associated with the following criteria for the reasons stated below.

Off-Site improvements as part of the Modified Project would not require or result in the relocation or construction of new or expanded water facilities, the construction or relocation of which could cause significant environmental effects.

Off-Site improvements as part of the Modified Project would not require or result in the relocation or construction of new or expanded water facilities, the construction or relocation of which could cause significant environmental effects. The off-site infrastructure includes improvements to utility infrastructure and the widening of Stenmark Drive. All off-site improvements would be consistent with all applicable regulations and would be designed to avoid interference with any existing off-site utility infrastructure.

Construction and operation of off-site improvements would not cause the Modified Project to have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.

The off-site infrastructure includes improvements to utility infrastructure and the widening of Stenmark Drive, which would not result in increased water demand. Instead, any increases in water demand resulting from implementation of the Modified Project would be associated with construction or operation of the on-site components of the Modified Project, which are analyzed below.

Construction and operation of off-site improvements would not result in a determination by the wastewater treatment provider that serves or may serve the Modified Project, that it does not have adequate capacity to serve the projected demand of the Modified Project in addition to the existing commitments of the provider.

The off-site infrastructure includes improvements to utility infrastructure and the widening of Stenmark Drive, which would not result in increased wastewater treatment demand. Instead, any increases in wastewater treatment demand resulting from implementation of the Modified Project would be associated with construction or operation of the on-site components of the Modified Project, which are analyzed below.

Operation of off-site infrastructure would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals; or fail to Comply with federal, State, and local management and reduction statutes and regulations related to solid waste.

The off-site infrastructure includes improvements to utility infrastructure and the widening of Stenmark Drive. Operation of these infrastructure improvements would not generate solid waste demand. Instead, any increases in solid waste generation resulting from implementation of the Modified Project would be associated with construction or operation of the on-site components of the Modified Project or construction of the off-site components of the Modified Project, which are analyzed below.

4.14.5.4 Project-Level Impacts

IMPACT 4.14.1	REQUIRE OR RESULT IN THE RELOCATION OR CONSTRUCTION OF NEW OR EXPANDED WATER FACILITIES, THE CONSTRUCTION OR RELOCATION OF WHICH COULD CAUSE SIGNIFICANT ENVIRONMENTAL EFFECTS
Significance Before Mitigation	Less Than Significant
Mitigation Measures	None Required
Significance After Mitigation	Not Applicable
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

Construction of the Modified Project

As described in **Section 3.4.6.1**, the Modified Project would obtain potable water service from EBMUD. A Water and Wastewater Master Plan was prepared to determine what new or expanded water facilities would be needed for the Modified Project and is included in **Appendix E**. As described therein, the Modified Project would require the installation of new service connections for the proposed redevelopment from the existing/proposed potable water mains in Stenmark Drive owned and operated by EBMUD within the public ROW.

The pressure available from EBMUD's 12-inch line is inadequate to provide the required fire flow of 1,500 gallons per minute at 20 pounds per square inch to all areas of development. As such, a new tank is needed to supply fire flow for the Modified Project. The capacity of the new tank must be at least 1 mgd to provide fire flow for the required duration. In lieu of one 1 mgd tank, EBMUD requires that two twin tanks, each with a volume of 0.5 mgd, be constructed. The twin tanks would require roughly 1 acre of land. A new booster pump would supply water to the new tanks and would require roughly 0.5 acres of land. The analyses show that 8-inch and 12-inch pipe sizes are needed to serve the fire flow from the new tanks. Figure C.2 of **Appendix E** shows preliminary pipe sizes for the new pipelines required to meet modeled demand scenarios.

The existing water supply system is primarily made up of asbestos-cement pipe and is known to have water quality problems; therefore, EBMUD would require all of the existing system to be replaced with a new system. On-site water facilities would be located within the public right-of-way (ROW) wherever feasible to allow for access and maintenance of facilities unless otherwise approved. Dedicated easements for water facilities on private property accessible to City personnel, fire trucks, and equipment for maintenance, repair, and servicing would be approved. The potable water system would be designed and constructed in accordance with the City and Fire Department Standard Plans and Specifications and to applicable federal, State, and local codes and standards unless otherwise permitted. The air quality, noise, and transportation impacts of relocation or construction of new or expanded water facilities would be encompassed within the environmental effects of construction of the entire project. Impacts associated

with the relocation or construction of new or expanded water facilities under the Modified Project would be less than significant.

Although the Water and Wastewater Master Plan did not show the need for any off-site improvements to provide water service to the Project Site, EMBUD indicated that improvements to off-site water mains and other infrastructure may be necessary to meet the water demands of the Modified Project in an August 2, 2019 letter to the City submitted during the scoping period for this Draft SEIR (see **Appendix B**). Off-Site improvements, if determined to be needed, could include upsizing and replacement of existing pipelines to the Project Site from a 16-inch water main in Western Drive. To the extent that these or other improvements to off-site infrastructure are required, they would take place within ROWs under existing streets. Construction of these improvements is not expected to result in significant environmental impacts, because the area of improvements would be relatively small and typical of minor infrastructure upgrades. Impacts to air quality and noise would be temporary and regulated by City ordinances, further described in **Section 4.2** and **Section 4.10**, respectively, of this SEIR. Impacts to traffic and transportation would be similar to temporary construction impacts described in **Section 4.13** and would be less than significant.

Construction of the Bay Trail

Impacts as a result of the construction and implementation of the Bay Trail are analyzed within the San Francisco Bay Trail (Bay Trail) at Point Molate Initial Study/Mitigated Negative Declaration (IS/MND), which is incorporated by reference, as described within **Section 1.4.4**. The Bay Trail IS/MND determined that impacts from the construction of the Bay Trail requiring or resulting in the construction or expansion of water facilities were less than significant because the Bay Trail would not require the construction or expansion of any new water facilities for either construction or operation purposes. Water usage for the construction and implementation of the Bay Trail would be negligible and existing resources have the capacity to serve any temporary water needs. As a result, construction of the Bay Trail would not require or result in the construction or expansion of water facilities and the impact would be less than significant.

IMPACT 4.14.2	REQUIRE OR RESULT IN THE RELOCATION OR CONSTRUCTION OF NEW OR EXPANDED WASTEWATER TREATMENT FACILITIES, THE CONSTRUCTION OR RELOCATION OF WHICH COULD CAUSE SIGNIFICANT ENVIRONMENTAL EFFECTS
Significance Before Mitigation	Potentially Significant
Mitigation Measures	Modified Project Mitigation: MM 4.8-3; MM 4.14-2
Significance After Mitigation	Less Than Significant
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

Construction of the Modified Project

There is currently no sewage collection system located in Planning Areas A through E. As such, the Modified Project would need to install a new wastewater collection pipe system in those areas to serve the proposed development. There is an existing collection system in Planning Areas G and H, some of which could be reused if not in conflict with proposed development. A layout of the proposed collection system is presented in Figure D.3 of **Appendix E**. The layout provides a sewer line in almost every street to allow flexibility for future sewer laterals for each building.

Wastewater Treatment Variant A

As described in **Section 3.4.6.2**, the Modified Project considers two wastewater treatment variants. Under Wastewater Treatment Variant A, in addition to the collection system pipelines described above, the system would comprise of lift stations and would force mains to overcome the uneven terrain, including the installation of a new sanitary WWTP onsite that would operate as a standalone treatment system for the sanitary sewer needs of the Modified Project. Under Variant A, all wastewater would be treated onsite; therefore, connection to the existing RMSD facilities would not be required.

The on-site WWTP would produce enough recycled water to satisfy 100 percent of the estimated maximum recycled water demands of the Modified Project. Tertiary effluent that is not used onsite for irrigation purposes would be conveyed via a new pipeline to the recycled water system within the Chevron®-Richmond Refinery as part of the RARE project described in **Section 4.14.3.3**, consistent with the cooperative agreement established by **Mitigation Measure 4.8-3**. Refer to **Figures 3-18** and **3-19** for the on-site treatment system location and layout, including the alignment of the proposed recycled water line to the Chevron® facility. In the event that the Chevron®-Richmond Refinery is temporarily unable to accept the recycled wastewater due to closure for maintenance, exceedance of capacity, or any other reason, wastewater will be trucked to the RMSD Plant for processing until the Chevron®-Richmond Refinery is able to accept the wastewater again.

The impacts resulting from the construction of on-site sewer lines, the on-site WWTP, and the off-site wastewater conveyance pipeline to the Chevron®-Richmond Refinery would be encompassed within the environmental effects of construction of the entire project. Impacts associated with the implementation of Wastewater Treatment Variant A under the Modified Project would be less than significant.

Wastewater Treatment Variant B

Under Wastewater Treatment Variant B, along with the installation of the wastewater collection pipe system described above, two on-site lift stations would be developed to overcome existing terrain, as well as a third off-site lift station on Marine Street and associated pipelines to connect the Modified Project to the existing system. Refer to **Figure 3-20** for the alignments of the potential utility corridors and associated facilities. On- and off-site wastewater treatment facilities would be located within the public ROW wherever feasible to allow for access and maintenance of facilities unless otherwise approved. Dedicated easements would be provided for wastewater facilities on private property accessible to City personnel, fire trucks, and equipment for maintenance, repair, and servicing. The impacts resulting from the construction of Wastewater Treatment Variant B would be encompassed within the environmental effects of construction of the entire project.

As described under **Impact 4.14.6** and **Appendix U**, while the existing RMSD WWTP was determined to have adequate capacity to serve the Modified Project, the condition and size of the existing pipe system from the proposed point of connection to the RMSD Plant were determined to be insufficient to support the Modified Project, and would require upgrades as provided in **Mitigation Measure 4.14-2**. Secondary effects resulting from implementation of **Mitigation Measure 4.14-2** are discussed in **Section 5.3** and were found to be less than significant. Impacts associated with the implementation of Wastewater Treatment Variant B under the Modified Project would be less than significant with mitigation.

Construction of the Bay Trail

Impacts as a result of the construction and implementation of the Bay Trail are analyzed within the Bay Trail IS/MND, which is incorporated by reference, as described within **Section 1.4.4**. The Bay Trail IS/MND determined that impacts from the construction of the Bay Trail requiring or resulting in the construction or expansion of wastewater facilities were less than significant because the Bay Trail would not require the construction or expansion of any new wastewater facilities for either construction or operation purposes. As a result, construction of the Bay Trail would not require or result in the construction or expansion of wastewater facilities and the impact would be less than significant.

IMPACT 4.14.3	REQUIRE OR RESULT IN THE RELOCATION OR CONSTRUCTION OF NEW OR EXPANDED STORMWATER DRAINAGE FACILITIES, THE CONSTRUCTION OR RELOCATION OF WHICH COULD CAUSE SIGNIFICANT ENVIRONMENTAL EFFECTS
Significance Before Mitigation	Less Than Significant
Mitigation Measures	None Required
Significance After Mitigation	Not Applicable
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

Construction of the Modified Project

Development of the Modified Project would add impervious surfaces to the Project Site due to residential and commercial development in currently undeveloped areas that would increase the amount of surface run-off at the Project Site. Therefore, operation of the Modified Project would require the relocation or construction of new or expanded stormwater drainage facilities as described in **Section 3.4.6.3** and **Appendix C**. The stormwater drainage facilities would include low-impact development (LID) features to treat runoff prior to discharge to the Bay. LID features could include any of the combination of the following: bioretention areas, flow through planters, pervious pavements, depressed landscaped areas, and green roofs in series with cisterns, vaults, and/or dry wells. A preliminary location of the centralized bioretention treatment basins is shown on Figure 4 of **Appendix C**.

As described in **Section 3.4.6.3** and **Appendix C**, the Modified Project would need fewer outfalls than what currently exist. Where an existing outfall is found to be under capacity, the Modified Project would consolidate the existing outfalls to minimize environmental impacts and permitting required to upsize the existing outfall. It is anticipated that Outfalls 2 and 10 would need to be upsized (**Appendix C**). Any unused outfalls would be abandoned in place (**Figure 3-6**). Energy dissipaters would be installed to prevent erosion and to reduce post-project flow velocities to lower than pre-project levels. Because the outfall pipes currently daylight to the shoreline above the edge of the water, these improvements would not impact habitat below the water.

The impacts resulting from the relocation or construction of new or expanded stormwater drainage facilities would be encompassed within the environmental effects of construction of the entire project. Impacts associated with the relocation or construction of new or expanded stormwater drainage facilities under the Modified Project would be less than significant. No off-site improvements related to stormwater drainage facilities are anticipated.

Construction of the Bay Trail

Impacts as a result of the construction and implementation of the Bay Trail are analyzed within the Bay Trail IS/MND, which is incorporated by reference, as described within **Section 1.4.4**. The Bay Trail IS/MND determined that impacts from the construction of the Bay Trail requiring or resulting in the construction or expansion of stormwater drainage facilities were less than significant because the Bay Trail would not require the construction or expansion of any new stormwater drainage facilities for either construction or operation purposes. As a result, construction of the Bay Trail would not require or result in the construction or expansion of stormwater drainage facilities and the impact would be less than significant.

IMPACT 4.14.4	REQUIRE OR RESULT IN THE RELOCATION OR CONSTRUCTION OF NEW OR EXPANDED ELECTRIC POWER, NATURAL GAS, OR TELECOMMUNICATIONS FACILITIES, THE CONSTRUCTION OR RELOCATION OF WHICH COULD CAUSE SIGNIFICANT ENVIRONMENTAL EFFECTS
Significance Before Mitigation	Less Than Significant
Mitigation Measures	None Required
Significance After Mitigation	Not Applicable
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

As described in **Section 3.4.6.5**, implementation of the Modified Project would require the construction of new or expanded electric power, natural gas, and telecommunications facilities. Electricity and natural gas would be obtained from PG&E, and telecommunications would be obtained from Comcast and AT&T.

Will-Serve letters sent by the service providers that acknowledge their willingness and availability to serve the Project Site are included in **Appendix H**.

As described in **Appendix H**, there is an existing PG&E single-phase overhead primary distribution system about 1/2 mile south of the Project Site. The density of the Modified Project would require PG&E to extend three-phase to the Project Site and then distribute to multiple three-phase and single-phase transformers as needed to provide service throughout the Project Site. Any undergrounding of the existing overhead electrical line along Stenmark Drive would occur during the planned roadway improvements to avoid additional environmental impacts, and would preserve the existing overhead electrical infrastructure extending between the southern project boundary and the existing connection point. The alignment of the proposed electrical line is illustrated in **Figure 3-21**.

There is currently no natural gas line connecting existing natural gas facilities to the Project Site. Therefore, development of the Modified Project would require the construction of an underground natural gas line to connect the Project Site to the existing natural connection point located south of I-580 near West Cutting Boulevard. The alignment of the proposed underground natural gas line is illustrated in **Figure 3-21**. As discussed for the electrical line extensions, the natural gas line extensions on the Project Site and along Stenmark Drive would be constructed during the planned roadway improvements to avoid additional environmental impacts on the Project Site.

Off-Site improvements associated with telecommunication services could include the extension of cables under Stenmark Drive to the Project Site. To the extent that these or other improvements to off-site infrastructure are required, they would take place within ROWs under existing streets. Construction of these improvements is not expected to result in significant environmental impacts, because the area of improvements would be relatively small and typical of minor infrastructure upgrades.

The impacts resulting from the relocation or construction of new or expanded electric power, natural gas, or telecommunications facilities would be encompassed within the environmental effects of construction of the entire project. Impacts associated with the relocation or construction of new or expanded electric power, natural gas, or telecommunications facilities under the Modified Project would be less than significant.

IMPACT 4.14.5	HAVE SUFFICIENT WATER SUPPLIES AVAILABLE TO SERVE THE PROJECT AND REASONABLY FORESEEABLE FUTURE DEVELOPMENT DURING NORMAL, DRY, AND MULTIPLE DRY YEARS
Significance Before Mitigation	Less Than Significant
Mitigation Measures	None Required
Significance After Mitigation	Not Applicable
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

Construction and Operation of the Modified Project

The estimated average daily water demand for the Modified Project would be approximately 370,160 gpd (290,160 gpd indoor; 80,000 gpd outdoor; **Appendix E**). The water demand analysis included in the Water and Wastewater Master Plan (**Appendix E**) reflects and incorporates the maximum demand represented by the Modified Project, and therefore has conservatively estimated the project water demand and wastewater generation. EBMUD Regulations § 31 requires that EBMUD review applications for new water service to determine the applicability of, and compliance with, water-efficiency requirements. EBMUD staff may inspect the installation of water-efficiency measures and fixtures to verify that the items are installed and performing to the required water use levels. Among other requirements, residential service requires high-efficiency or dual-flush toilets, dishwashers, and clothes washing machines, as well as low-flow showerheads and faucets. Outdoor landscaping plans are required for any new or retrofitted landscaping greater than 5,000 sq. ft. of irrigated area, and ornamental turf must be limited to no more than 25 percent of total irrigated area.

As described in **Section 4.14.3.2**, EBMUD issued a WSA for the Casino Project in 2008 for approximately 864,000 gpd. In response to a request from the City for water agency consultation concerning the Modified Project, EBMUD reviewed the conditions for which an additional WSA would be required for subsequent projects within the scope of a project considered in an earlier WSA pursuant to California Water Code § 10910(h). As set forth in a December 16, 2019 letter to the City, included in **Appendix F**, EBMUD found that the Modified Project would result in an overall reduction of approximately 494,000 gpd in estimated water demand as compared to the Casino Project and that a second WSA need not be required for the Modified Project.

Further, under Wastewater Treatment Variant A, the on-site WWTP would produce enough recycled water to satisfy 100 percent of the estimated maximum recycled water demands of the Modified Project. Tertiary effluent that is not used onsite for irrigation purposes would be conveyed via a new pipeline to the recycled water system within the Chevron®-Richmond Refinery as part of the RARE project described in **Section 4.14.3.3**. Assuming an irrigation demand of 80,000 gpd for the Modified Project, approximately 0.16 mgd would be redirected to Chevron®, fulfilling 32 percent of their existing recycled water demand and 3.6 percent of projected future recycled water demand (EBMUD, 2019c). This reduction in potable water demand through the use of recycled water at the Chevron®-Richmond Refinery would increase the potable water available to other users. The Modified Project would have a less-than-significant effect on the water supply.

Construction of the Bay Trail

Impacts as a result of the construction and implementation of the Bay Trail are analyzed within the Bay Trail IS/MND, which is incorporated by reference, as described within **Section 1.4.4**. The Bay Trail IS/MND determined that impacts from the construction of the Bay Trail resulting in having sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years were less than significant because the Bay Trail does not require water for either construction or operations. As a result, construction of the Bay Trail would not result in the need of available water supplies to serve the Modified Project and the impact would be less than significant.

IMPACT 4.14.6	RESULT IN A DETERMINATION BY THE WASTEWATER TREATMENT PROVIDER THAT SERVES OR MAY SERVE THE MODIFIED PROJECT, THAT IT HAS ADEQUATE CAPACITY TO SERVE THE PROJECTED DEMAND OF THE MODIFIED PROJECT IN ADDITION TO THE EXISTING COMMITMENTS OF THE PROVIDER
Significance Before Mitigation	Potentially Significant
Mitigation Measures	Modified Project Mitigation: MM 4.8-3; MM 4.14-1
Significance After Mitigation	Less Than Significant
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

Operation of Modified Project

Wastewater Treatment Variant A

Under Wastewater Treatment Variant A, the Modified Project would include the construction of an on-site WWTP. All wastewater would be directed to the on-site WWTP where it would be treated to a tertiary level, and then subsequently recycled onsite or conveyed to the adjacent Chevron®-Richmond Refinery for reuse as part of the RARE project described in **Section 4.14.3.3. Appendix E** estimates that the Modified Project would generate a demand of approximately 275,672 gpd. The on-site WWTP would be constructed in phases of 0.25 or 0.5 mgd increments and would ultimately be built out to a capacity of 1 mgd. Therefore, the proposed wastewater treatment system would meet the Modified Project's wastewater treatment demand. No additional treatment capacity at the RMSD WWTP would be required. **Mitigation Measure 4.8-3** provides provisions for the treatment, conveyance, and use of recycled water under Wastewater Treatment Variant A to ensure that Chevron® would have capacity for the excess recycled water from the Modified Project. This impact would be less than significant with mitigation.

Wastewater Treatment Variant B

Under Wastewater Treatment Variant B, the Modified Project would connect to the existing sewer system of the City through one of two optional alignments shown on **Figure 3-20**, both of which would connect to the City's system near the intersection of Tewksbury Avenue and Contra Costa Street. A hydraulic model was conducted of the City's sewer system to determine the capacity of the existing sewer lines to accommodate the approximately 716,750 gpd peak wet weather flow that would be generated by the Modified Project. As detailed in **Appendix U**, the hydraulic modeling concluded that there is one segment of existing sewer pipelines that does not have sufficient capacity to carry the additional flows of the Modified Project, resulting in a significant impact. **Mitigation Measure 4.14-1(a)** requires the upsizing of approximately 530 linear feet pipeline on Tewksbury Avenue between Marine Street and Clarence and Vacca Streets from a 6-inch diameter pipeline to a 10-inch diameter pipeline. Implementation of this mitigation measure would reduce this impact to less than significant. Secondary effects resulting from implementation of **Mitigation Measure 4.14-1** are discussed in **Section 5.3**.

In addition to reviewing capacity, a review was done of the condition of the existing sewer system that would be used to convey wastewater generated by the Modified Project. The review found that one pipe segment has numerous National Association of Sewer Service Companies Pipeline Assessment Certification Program Structural Grade 4 defects and would need to be replaced prior to increasing the flow through the pipe as a result of the Modified Project, resulting in a significant impact. **Mitigation Measure 4.14-1(b)** requires the replacement in kind or lining of approximately 432 linear feet of 36-inch pipeline on Railroad Avenue, east of the intersection with West Richmond Avenue. Implementation of this mitigation measure would reduce this impact to a less-than-significant level. Secondary effects resulting from implementation of **Mitigation Measure 4.14-1** are discussed in **Section 5.3**.

As described in **Appendix U**, the RMSD WWTP and wet weather storage facility have sufficient capacity to convey and treat the additional flows generated by the Modified Project. The RMSD Plant is designed to treat up to 42 million gallons per day of wastewater during wet weather events. The RMSD Plant is also equipped with an influent bypass pumping station and 5 million-gallon storage tank. Together, these facilities are designed to receive up to 68 million gallons per day of peak hourly wet weather flow without sanitary sewer overflows (**Appendix U**). At full buildout the Modified Project would have a peak wet weather flow of approximately 716,750 gpd, approximately 1.7 percent of the RMSD WWTP wet weather capacity and 1.0 percent of peak hourly wet weather capacity of the combined RMSD and influent bypass system. This would be a less-than-significant impact.

Construction of the Bay Trail

Impacts as a result of the construction and implementation of the Bay Trail are analyzed within the Bay Trail IS/MND, which is incorporated by reference, as described within **Section 1.4.4**. The Bay Trail IS/MND determined that impacts from the construction of the Bay Trail resulting in a determination by the serving wastewater treatment provider has adequate capacity to serve the Bay Trail were less than significant because the Bay Trail does not require sewer or water treatment facilities for either construction or operation purposes. As a result, construction of the Bay Trail would not result in adversely affecting the nearby water treatment facility because the Bay Trail does not require it and as a result the impact would be less than significant.

IMPACT 4.14.7	GENERATE SOLID WASTE IN EXCESS OF STATE OR LOCAL STANDARDS, OR IN EXCESS OF THE CAPACITY OF LOCAL INFRASTRUCTURE, OR OTHERWISE IMPAIR THE ATTAINMENT OF SOLID WASTE REDUCTION GOALS; OR FAIL TO COMPLY WITH FEDERAL, STATE, AND LOCAL MANAGEMENT AND REDUCTION STATUTES AND REGULATIONS RELATED TO SOLID WASTE
Significance Before Mitigation	Less Than Significant
Mitigation Measures	None Required
Significance After Mitigation	Not Applicable
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

Construction of the Modified Project and Off-Site Infrastructure

The Modified Project includes the demolition of Navy-era buildings as well as the construction of residential and commercial land uses and supporting infrastructure. As indicated in **Section 3.0**, Project Description, the project would comply with CALGreen, which requires construction or demolition projects to demonstrate that at least 50 percent of the construction and demolition non-hazardous debris generated on the job site are reused, recycled, or otherwise diverted. The Applicant (Winehaven Legacy, LLC for the Modified Project) or their contractor would prepare a Construction Waste Management Plan (required by the City prior to issuance of a building permit for a project), describing anticipated construction and demolition waste and how the 50 percent diversion rate would be met. This plan would be submitted to the Richmond Planning and Building Services Department for review. As detailed in **Section 4.7.5.4**, hazardous waste resulting from construction of the Modified Project would be separated from non-hazardous waste that could be recycled or disposed of, and would subsequently be transported and disposed of according to federal, State, and local laws. Upon completion of construction for the Modified Project, a Debris Recovery Report would be submitted to indicate the actual debris that was generated from the Modified Project and its ultimate destination. Therefore, a less-than-significant impact related to the generation of construction debris and compliance with solid waste regulations would result.

Operation of Modified Project

During operation, solid waste would be generated from residential and commercial uses. As shown in **Table 3-2**, solid waste generation from the operation of the various components of the Modified Project is estimated to be up to 25,149 pounds (12.6 tons) per day. Solid waste materials would be sorted onsite into recyclable materials and materials that would require disposal, and would then be transported to the Golden Bear Transfer Station that would then redirect the waste to the Keller Canyon Landfill in Pittsburg. The Keller Canyon Landfill has a permitted capacity of approximately 75 million cy and a permitted daily intake limit of 3,500 tons (CalRecycle, 2019b). With current intake rates, the estimated closure year of the facility is 2050. The incremental addition of a maximum of 12.6 tons per day, which is 0.3 percent of the maximum daily intake limit, is within the capacity of this facility. The additional waste quantities generated by operation of the Modified Project would not exceed landfill capacity.

The Modified Project would comply with local solid waste ordinances as well as State standards for reducing solid waste. Because State and local laws and regulations are more stringent than federal standards, State and local laws are the primary driver for the reduction in solid waste. Specifically, the Modified Project would be required to comply with the laws and regulations that aim to divert waste from landfills, including, but not limited to, AB 939, CALGreen, the City Green Building Standards, and the regulations set forth by WCCIWMA, which all require reductions in waste. Therefore, the Modified Project would result in a less-than-significant impact related to generation of operational solid waste and compliance with solid waste laws and regulations.

Construction of the Bay Trail

Impacts as a result of the construction and implementation of the Bay Trail are analyzed within the Bay Trail IS/MND, which is incorporated by reference, as described within **Section 1.4.4**. The Bay Trail IS/MND determined that impacts from the construction of the Bay Trail resulting in the generation of excess solid waste or failing to comply with federal, State, or local management were less than significant

because construction activities for the Bay Trail would generate solid wastes requiring disposal at area landfills. The types of construction waste that would be generated include vegetation from site clearing, soil export from grading activities, construction waste, signs, and excess trail-building materials. Furthermore, any hazardous wastes generated during construction of the Modified Project would be handled and disposed of consistent with applicable federal, State, and local statutes and regulations, including the City's Solid Waste Ordinance. As a result, construction of the Bay Trail would not result in the generation of excess solid waste or failing to comply with federal, State, or local management and the impact would be less than significant.

4.14.5.5 Cumulative Impacts

IMPACT 4.14.8	CUMULATIVE UTILITIES IMPACTS
Significance Before Mitigation	Less Than Significant
Mitigation Measures	Modified Project Mitigation: MM 4.14-1
Significance After Mitigation	Less than Significant
Comparison with 2011 FEIR	No New or Substantially More Significant Impact

The cumulative impact area for utility and service systems includes the City and the service areas of the local utility providers. EBMUD provides water for parts of Alameda and Contra Costa counties, RMSD provides wastewater and treatment services to the Project Site and adjacent areas covering most of the incorporated area of the City, and WCCIWMA contracts to provide solid waste and recycling services to the cities of El Cerrito, Hercules, Pinole, Richmond, San Pablo, and incorporated areas of west Contra Costa County.

As discussed above in **Section 4.14.5.4**, the construction and operation of the Modified Project would have less-than-significant impacts related to water and wastewater treatment facilities, stormwater facilities, water supply, and solid waste disposal. These determinations are based on the water supply assessment for the Modified Project (**Appendix F**) and will-serve letters provided by the utility providers (**Appendix H**), as well as the various facilities' projected and permitted capacities which also consider anticipated growth in the respective service areas.

Appendix U describes that City's hydraulic model for the existing wastewater collection system is calibrated to current wastewater flows. The General Plan identifies three key corridors that will undergo densification in the future, potentially adding new dry weather flow to the system: Downtown/Macdonald Avenue, Hilltop, and Ford Peninsula in Marina Bay. Although the Hilltop corridor is located within City limits, associated wastewater flows are managed by the WCWD to the north. Although dry weather flows from the two remaining areas are likely to increase, capacity needs for the Downtown/Macdonald Avenue and Ford Peninsula in Marina Bay areas are dictated by wet weather flows. Wet weather flows are not projected to increase significantly in the General Plan buildout scenario. Therefore, the modeling results

for the existing system also sufficiently predict capacity needs in the General Plan buildout scenario. As described for **Impact 4.14.6**, **Mitigation Measure 4.14-1** requires the upgrade of two segments of existing sewer pipeline, which would allow sufficient capacity to carry the added flows from the Modified Project at buildout and in cumulative years, reducing the cumulative impact to a less-than-significant level. Secondary effects resulting from implementation of **Mitigation Measure 4.14-1** are discussed in **Section 5.3**.

Keller Canyon Landfill, the receiving landfill for waste generated in the WCCIWMA service area, has an estimated available capacity and operating permits until 2050. Therefore, the additional waste quantities generated by construction and operation of the Modified Project would result in a less-than-significant impact. Overall, the less-than-significant individual impacts of the Modified Project, combined with past, present, and other foreseeable development in the area would not result in a cumulative impact.

With implementation of **Mitigation Measure 4.14-1**, the Modified Project's contribution to a cumulative impact would be less than cumulatively considerable.

4.14.6 MITIGATION MEASURES

This section includes mitigation measures that have been identified to reduce environmental impacts of the Modified Project. Mitigation measures that were identified in the 2011 FEIR have been identified again as appropriate; however, review of the mitigation measures identified in the 2011 FEIR determined that some measures required revisions or were not applicable to the Modified Project. **Appendix K** provides a summary of whether each mitigation measure from the 2011 FEIR was revised, deleted, or kept as is and the reasoning for that determination.

MM 4.14-1 RMSD Application for Connection: Winehaven Legacy, LLC shall apply to connect to the RMSD for conveyance and treatment of wastewater generated at the Project Site. Subsequent to approval of connection to RMSD and prior to issuance of occupancy permits, the Modified Project shall fully fund or implement the following upgrades to the conveyance system to provide adequate conveyance and treatment capacity for the peak day wastewater generation rate of the Modified Project. Alternatively, if the City implements any of these improvement prior to issuance of occupancy permits for the Modified Project, the improvement would not be required to be implemented and the City may collect fair-share contributions from the Modified Project to support implementation.

MM 4.14-1 (a) Upgrade to Existing Infrastructure: Upsizing of 530 linear feet of an existing 6-inch pipe to a 10-inch pipe;

MM 4.14-1 (b) Replacement of Existing Infrastructure: In-kind replacement or lining, as approved by the Public Works Director, of 432 lineal feet of an existing 36-inch pipe.

SECTION 5.0

CEQA CONSIDERATIONS

5.0 CEQA CONSIDERATIONS

5.1 INTRODUCTION

Section 15126 of California Environmental Quality Act (CEQA) Guidelines requires that all aspects of a project must be considered when evaluating its impact on the environment, including planning, acquisition, development, and operation. CEQA-required discussions pertinent to the Point Molate Mixed-Use Development Project (Modified Project) are included in this section, including the following:

- Indirect and Growth-Inducing Impacts of the Modified Project (**Section 5.2**)
- Secondary Effects from Mitigation Measures (**Section 5.3**)
- Cumulative Impact Analysis(**Section 5.4**)
- Significant and Unavoidable Impacts (i.e., residually significant impacts) (**Section 5.5**)
- Irreversible Changes (**Section 5.6**)

5.2 INDIRECT AND GROWTH-INDUCING IMPACTS

The CEQA Guidelines require that an Environmental Impact Report (EIR) evaluate the growth-inducing impacts of a proposed action (CEQA § 15126.2[d]). A growth-inducing impact is defined by the CEQA Guidelines as:

[T]he ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth.... It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

A project can have direct and/or indirect growth-inducement potential. Direct growth inducement could result if a project involved construction of new housing. A project can have indirect growth inducement potential if it would establish substantial new permanent employment opportunities (e.g., commercial, industrial, or governmental enterprises) or if it would involve a substantial construction effort with substantial short-term employment opportunities and indirectly stimulate the need for additional housing and services to support the new employment demand. Similarly, under CEQA, a project would indirectly induce growth if it would remove an obstacle to additional growth and development, such as removing a constraint on a required public service. Increases in population could tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. The CEQA Guidelines also require analysis of the characteristics of projects that may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively.

The timing, magnitude, and location of land development and population growth is based on various interrelated land use and economic variables. Key variables include regional economic trends, market demand for residential and non-residential uses, land availability and cost, the availability and quality of transportation facilities and public services, proximity to employment centers, the supply and cost of

housing, and regulatory policies or conditions. Because general plans define the location, type, and intensity of growth, they are the primary means of regulating development and growth in California.

The growth-inducing impacts analysis addresses the potential of the project for growth inducement in the project vicinity or broader area that causes direct or indirect impacts to the physical environment. Under CEQA, a project is generally considered to be growth-inducing if it results in any one of the following.

1. Extension of urban services or infrastructure into a previously unserved area
2. Extension of a transportation corridor into an area that may be subsequently developed
3. Removal of obstacles to population growth (such as provision of major new public services to an area where those services are not currently available)

5.2.1 EXTENSION OF URBAN SERVICES OR INFRASTRUCTURE

As a result of the Modified Project, extensive infrastructure improvements would occur onsite, including widening of Stenmark Drive, construction of on-site sewer and storm drainage collection infrastructure, and construction of on-site water and energy distribution infrastructure. In addition, under Wastewater Treatment Variant B, an extension of a wastewater sewer pipeline that would connect the Project Site to the City of Richmond (City) would be constructed. These improvements would extend urban services to the Project Site beyond the amount of infrastructure existing. The Project Site is not a greenfields site and has been used for a variety of intense uses in the past. Development such as that proposed as a part of the Modified Project is consistent with planned uses for the Project Site.

Extension of urban services as proposed will facilitate the Modified Project, but will not provide capacity for development of other undeveloped areas. As described in **Section 4.11.5.4**, infrastructure would be developed and sized so as to serve the new development, and not to accommodate future, unplanned growth. The surrounding area is dominated by land designated for industrial uses, which has been developed and is already served by infrastructure, or is designated open space, steep hillsides, or water, which are not suitable for development. Therefore, it is unlikely that the development of the on-site and off-site infrastructure would increase growth in the area due to the nature of the Project Site as well as the land use and physical constraints of the surrounding areas. Moreover, infrastructure, including roads and utilities, already exists on the Project Site and in the vicinity.

Therefore, the Modified Project would not result in indirect growth as a result of the extension of utilities or road improvement infrastructure to the Project Site and proposed infrastructure improvements would not result in growth-inducing impacts.

5.2.2 EXTENSION OF TRANSPORTATION CORRIDOR

The Project Site is isolated from existing residential areas and is bordered by a Chevron® refinery on three sides. The only road available that provides direct access to the Project Site is Stenmark Drive. To accommodate the Modified Project, Stenmark Drive is proposed to be widened, resulting in the marginal expansion of transportation corridors into the Project Site, a previously developed . As described above, development such as that proposed as a part of the Modified Project is consistent with planned uses for the site. Widening of Stenmark Drive would facilitate the Modified Project, but would not provide capacity

for development of other undeveloped areas, given the Project Site's isolated location. Therefore, proposed transportation improvements would not result in growth-inducing impacts.

5.2.3 REMOVAL OF OBSTACLES TO POPULATION GROWTH

A project is considered growth inducing if it would remove obstacles to population growth (such as provision of major new public services to an area where those services are not currently available). The Modified Project would complete the remediation of the Project Site, removing an obstacle to its reuse for non-military purposes. However, that clean up is intended to facilitate the Modified Project and not other additional, growth. In addition, the Modified Project would provide a new ferry/water taxi service, but this service is already provided elsewhere in the area, including at the Richmond Ferry Terminal, which is only a few miles from the Project Site. In addition, the Modified Project would construct new infrastructure (water and wastewater), but as discussed above, the infrastructure is sized to serve only the Modified Project and the surrounding area is already served by water and wastewater infrastructure. Accordingly, the Modified Project would provide major new public services to an area where those services are not currently available.

5.2.3 Generate Indirect Population Growth

Section 15126.2(d) of the CEQA Guidelines states that an EIR should discuss "the ways in which the project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment." The Modified Project would construct additional housing and restaurant/retail space under both Option 1 and Option 2. Under Option 2, the Modified Project also would include new commercial uses, which would generate new jobs.

Section 4.11, *Population and Housing*, analyzes the Modified Project's overall effect on population and housing, including growth-inducing considerations. As described in **Section 4.11.5**, in 2017, the City had a total population of approximately 108,853 people and was projected to have a population increase of approximately 44,780 people between the years 2015 and 2040. As presented in **Table 4.11-6**, the Modified Project would accommodate 3,536 residents under Option 2 and 5,773 residents under Option 1, which would increase the population of the City in 2017 by approximately 3.2 and 5.3 percent, respectively. The Modified Project's population would constitute approximately 7.9 and 12.9 percent of the City's projected population growth in the years 2015 and 2040, under Option 2 and Option 1, respectively. **Section 4.11.5** also explains that through the *1997 Point Molate Reuse Plan*, the City General Plan 2030 (General Plan), and zoning, the City has extensively and consistently planned for development and growth at Point Molate and on the San Pablo Peninsula. Furthermore, as described in **Section 4.11.2**, the Regional Housing Needs Plan requires the City to permit a total of 2,435 housing units, with 743 units allocated for very low to low-income families, by 2023 for the San Francisco Bay (Bay) Area to reach its regional housing need allocation. Both Option 2 (Commercial-Heavy Option) and Option 1 (Residential-Heavy Option) would result in housing that would help the City meet its Regional Housing Needs Allocation (RHNA) and would aid the Bay Area in reaching its overall RHNA.

In addition to the residential development proposed, the Modified Project would construct and rehabilitate approximately 40,000 square feet of combined space for retail and restaurant uses. This small amount of commercial use would not be anticipated to create a substantial number of jobs, and the jobs generated

are anticipated to be filled by workers living within commuting distances from the Project Site. Therefore the retail/restaurant uses would not induce growth resulting in the need to provide additional housing for employees. Other non-residential uses would consist of recreational and open space uses, which would be an expansion of existing recreational uses. Similarly, these uses would not be anticipated to create a substantial number of jobs, and therefore would not induce substantial growth requiring the construction of new housing for employees. Unlike Option 1, Option 2 would contain over 580,000 square feet for commercial uses, including office/research and development uses. Such uses could generate approximately 1,900 new employees, which could generate new demand for housing in the City. Under Option 2, the Modified Project would construct 1,260 new residences, which is more than enough new housing to offset the housing need generated by Option 2's employment uses. This does not mean that the Option 2 workers would live at the Modified Project, but that the Modified Project is providing sufficient housing to meet the new demand it would generate.

Residential growth, as discussed above, would be consistent with the General Plan projections for residential growth. Commercial uses required to serve the residential growth associated with the Modified Project would be located within the Project Site as a part of the Modified Project, and also in close proximity to already developed areas of Richmond and Contra Costa County. Further, the demand for housing generated by employees under Option 2 would be offset by the housing created by the Modified Project. For these reasons, the residential and commercial uses proposed by Option 1 and Option 2 of the Modified Project would not generate substantial indirect growth.

5.2.4 CONCLUSIONS

Implementation of the Modified Project is not anticipated to create or increase pressure on, or remove obstacles for other areas to develop or intensify in the surrounding area, and would not generate substantial indirect growth whose housing demand exceeds the housing added by the Modified Project. Additionally, the Modified Project falls within the planned growth considered in the General Plan and the General Plan EIR.

5.3 SECONDARY EFFECTS FROM MITIGATION MEASURES

Section 15126.4(a)(1)(D) of the CEQA Guidelines requires that if a mitigation measure would cause one or more significant effects in addition to those that would be caused by the proposed project, these be discussed in the EIR (in less detail than the significant effects of the proposed project). Of the mitigation measures identified in the EIR, **Mitigation Measure 4.13-1**, which consists of roadway and intersection improvements, and **Mitigation Measure 4.14-2**, which consists of funding Richmond Municipal Sewer District (RMSD) conveyance improvements, could result in additional significant effects beyond those of the Proposed Project. The following provides a discussion of the potential secondary effects that could occur as a result of implementing these mitigation measures.

5.3.1 SECONDARY EFFECTS FROM MITIGATION MEASURE 4.13-1

Five intersections have been identified as locations where traffic mitigation would be required as a result of increased trips generated by the Modified Project. These intersections are shown on **Figure 4.13-1** and listed below.

- Castro Street and the Interstate 580 (I-580) Westbound (WB) Ramps/Chevron® Entrance (Intersection #1)
- Richmond Parkway and West Gertrude Avenue (Intersection #21)
- Richmond Parkway and Parr Boulevard (Intersection #22)
- Richmond Parkway and San Pablo Avenue (Intersection #23)
- Richmond Parkway and Goodrick Avenue (Intersection #29)

Potential effects that could occur from construction and operation of these improvements that would be significant and unavoidable, even with implementation of the mitigation measures identified in this Subsequent Environmental Impact Report (SEIR) for the Modified Project, would occur in the following area:

- Greenhouse Gas (GHG) Emissions

Potential effects that could occur from construction and operation of these improvements would be reduced to a less-than-significant impact with implementation of the mitigation measures identified in this Subsequent Environmental Impact Report (SEIR) for the Modified Project would occur in the following areas:

- Air Quality
- Geology, Soils, and Mineral Resources
- Hazards, Hazardous Materials, and Wildfire
- Hydrology and Water Quality
- Noise

It is not anticipated that the construction of these improvements would result in significant impacts in the following areas, as the activities included would consist of ground disturbance and construction of roadway improvements, not structures, and operation of the improvements would not generate any new jobs or housing or demand for public services, utilities, or energy.

- Aesthetics
- Energy
- Land Use and Planning
- Population and Housing
- Public Services and Recreation
- Transportation
- Utilities and Service Systems

Potential effects that could occur from construction of these improvements that may not have been identified for the Modified Project, as these improvements are outside of the footprint of development of the Modified Project, would be in the areas of:

- Biological Resources, and

- Cultural Resources and Tribal Cultural Resources

5.3.1.1 Biological Resources

Secondary effects from **Mitigation Measure 4.13-1** have the potential to impact biological resources. Roadway widening and intersection improvements along Castro Drive near the I-580 WB ramp have the potential to convert habitat and impact biological resources.

Habitat on and in the vicinity of roadway improvements included in **Mitigation Measure 4.13-1** was evaluated and consists of ruderal and disturbed habitat. Ground in this area consists largely of paved roadway with minimal vegetative cover. Vegetation present consists of landscape plantings. Wildlife access to this area is prevented via fencing of the Chevron® property and of neighboring properties. The network of major roadways, freeway lanes, railroad tracks, and dense urban development act as additional barriers preventing wildlife movement on or through the roadway improvement area described in **Mitigation Measure 4.13-1**. However, trees along the roadside shoulder may provide suitable nesting bird habitat. Therefore, potential construction disturbance to nesting birds is the only potentially significant impact that **Mitigation Measure 4.13-1** may have on biological resources. Implementation of **Mitigation Measure 4.3-5** would reduce impacts on nesting birds to a less-than-significant level should construction activities related to **Mitigation Measure 4.13-1** commence during the general nesting season.

5.3.1.2 Cultural Resources and Tribal Cultural Resources

Record Search

A record search was completed by the Northwest Information Center (NWIC; NWIC File No.: 19-0524) on October 10, 2019. This search included a 1/8-mile radius around each of the five intersection improvement areas. Numerous studies have been completed within 1/8 mile of each of the various intersections. The NWIC results indicate that only one known resource would potentially be affected by the off-site traffic improvements: Richmond Parkway at Parr Boulevard (Intersection #22). This intersection is located near the West County Wastewater District (WCWD) Water Pollution Control Plant (WPCP).

The WCWD (known as the West Contra Costa Sanitary District prior to December 1, 1992, and as the San Pablo Sanitary District prior to January 10, 1978) was organized on December 19, 1921, to provide wastewater service to the residential communities of San Pablo and North Richmond. The WCWD has been in continuous operation since this time, and provides sewage collection, treatment, and disposal, covering nearly 17 square miles and serving approximately 93,000 individuals. The WCWD WPCP was originally completed by the WCWD in the mid-1950s to serve the residential and industrial growth in the area that occurred during the post-war period. Plant expansions in the 1960s–1980s added capacity to accommodate yet more growth in the area. The WPCP consists of approximately 129 acres including the 15-acre main plant complex and 32 acres of sludge drying lagoons. The main plant includes an operations and lab building, control building, chlorine building, shop building, and equipment buildings, along with various wastewater treatment facility equipment including clarifiers, digesters, aeration basins, and sedimentation basins. The WPCP has been found to be ineligible for listing on the National Register of Historic Places (NRHP) or the California Register of Historical Resources.

Pedestrian Survey

Analytical Environmental Services completed a pedestrian survey of the off-site traffic improvements areas on September 5, 2019. All areas were highly developed, with little natural ground surface visibility. No cultural resources were identified during the surveys.

No cultural resources were identified at Castro Street and the I-580 Eastbound Ramps (Intersection #1), Richmond Parkway at Gertrude Avenue (Intersection #21), Richmond Parkway at San Pablo Avenue (Intersection #23), or Richmond Parkway and Goodrick Avenue (Intersection #29).

Conclusion

No cultural resources were identified that would be affected by the implementation of **Mitigation Measure 4.13-1**. If cultural resources are uncovered during construction of off-site traffic improvements, the provisions of **Mitigation Measures 4.4-4, 4.4-5, and 4.4-6** would reduce impacts to cultural resources to a less-than-significant level.

5.3.2 SECONDARY EFFECTS FROM MITIGATION MEASURE 4.14-2

Mitigation Measure 4.14-2 requires that the Applicant apply to connect to the RMSD for conveyance and treatment of wastewater generated at the Project Site. In accordance with the application procedure, the Applicant shall pay its fair share for improvements, if necessary, consistent with typical commercial requests for service, to fund upgrades to the conveyance system to reduce existing rates of infiltration and inflow to such an extent as to provide adequate conveyance and treatment capacity for the peak day wastewater generation rate of the Modified Project.

The specific improvements consist of replacing 530 linear feet of 6-inch diameter pipeline with 10-inch diameter pipeline on Tewksbury Avenue between Marine Street and Clarence and Vacca Streets, and replacing or lining 432 linear feet of 36-inch diameter pipeline that has defects north of West Richmond Avenue. Because of the small amount of construction that would occur to replace these relatively short lengths of existing pipeline, and because all pipeline would be a replacement for existing pipeline, it is not anticipated that any significant impacts associated with construction or operation of these improvements would occur beyond those impacts already identified in this SEIR.

5.4 CUMULATIVE IMPACT ANALYSIS

5.4.1 INTRODUCTION

This SEIR analyzes overall cumulative impacts of the Modified Project taken together with other past, present, and reasonably foreseeable future projects producing related impacts, as required by CEQA Guidelines § 15130.

The goal of this analysis is twofold: first, to determine whether the overall long-term impacts of all such projects would be cumulatively significant; and second, to determine whether the Modified Project itself

would cause a “cumulatively considerable” (and thus significant) incremental contribution to any such cumulatively significant impacts.

In other words, the required analysis first creates a broad context in which to assess the Modified Project’s incremental contribution to anticipated cumulative impacts, viewed, where appropriate, on a geographic scale well beyond the Project Site itself, and then determines whether the Modified Project’s incremental contribution to any significant cumulative impacts from all projects is itself significant (i.e., “cumulatively considerable”).

“Cumulative impacts” refers to two or more individual effects that, when considered together, are considerable or that compound or increase other environmental impacts (CEQA Guidelines § 15355). The individual effects may be changes resulting from a single project or many separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the Modified Project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant impacts taking place over time.

Consistent with state CEQA Guidelines § 15130(a), the discussion of cumulative impacts in this SEIR focuses on significant cumulative impacts to which the Modified Project may contribute. According to CEQA Guidelines § 15130(b), in part, “The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness, and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact.”

To be adequate, a discussion of the cumulative effects should include the following.

- A list of past, present, and probable future projects producing related or cumulative impacts, including if necessary, those projects outside the control of the agency, or a summary of projections contained in an adopted local, regional or statewide plan, or related planning document, that describes or evaluates conditions contributing to the cumulative effect. Such plans may include: a general plan, regional transportation plan, or greenhouse gas reduction plan. A summary of projections may also be contained in an adopted or certified prior environmental document for such a plan. Such projections may be supplemented with additional information such as a regional modeling program. Any such document shall be referenced and made available to the public at a location specified by the Lead Agency.
- A definition of the geographic scope of the area affected by the cumulative effect and provide a reasonable explanation for the geographic limitation used
- A summary of expected environmental effects to be produced by those projects with specific reference to additional information
- A reasonable analysis of the impacts of the relevant project, and feasible options for mitigating or avoiding the project’s contribution to any significant cumulative effects

An analysis of cumulative impacts follows the evaluation of project impacts in each section in **Section 4.0**, and all cumulative impacts are summarized in **Section 5.4**.

5.4.2 APPROACH

CEQA defines cumulative as “two or more individual effects which, when considered together, are considerable, or which can compound or increase other environmental impact.” Section 15130 of the CEQA Guidelines requires that an EIR evaluate potential environmental impacts when the project’s incremental effect is cumulatively considerable. “Cumulatively considerable” means that the incremental effects of an individual project are significant when viewed in connection with the effects of past, present, existing, approved, pending, and reasonably foreseeable future projects. These impacts can result from a combination of a project together with other projects causing related impacts. “The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects.”

CEQA Guidelines § 15130(b)(1) identifies two approaches to cumulative impacts analysis. Specifically, cumulative impacts analysis can be based on: (1) a list of past, present, and probable future projects producing related impacts that could combine with those of a proposed project; or (2) a summary of projections contained in a general plan or related planning document. As described below, this Draft SEIR uses both a list-based approach and a projections approach, or a combination, as appropriate for each impact area. The cumulative impact analysis in each of the resource areas discusses the cumulative background evaluated in the cumulative impact analysis for that topic. This analysis has been updated from the *Final Environmental Impact Report for the Pont Molate Mixed-Used Tribal Destination Resort and Casino Project*.

5.4.3 CUMULATIVE CONTEXT

5.4.3.1 Cumulative Land Use and Infrastructure Assumptions

The growth projections used in the cumulative analysis are based on the Association of Bay Area Government’s projections for year 2040, the General Plan, and specific projects identified by the City that would potentially affect the environment within the same context as the Modified Project.

The adopted plans have been prepared by local agencies to meet the requirements of State and federal law, and provide comprehensive, long-term visions for that plan for the region’s future growth and related physical development. For example, the City’s General Plan includes specific goals and policies to preserve and enhance existing development and to provide for orderly and appropriate new development until approximately the year 2030. City land use and development actions and approvals must be consistent with the General Plan.

For the analyses that relate to traffic, including transportation, air emissions from mobile sources, GHGs from mobile sources, and noise from mobile sources, cumulative scenario projections for vehicle traffic were developed using the Contra Costa Transportation Authority Countywide Travel Demand Model to account for potential changes to regional traffic conditions from cumulative projects. No improvements

were assumed in the cumulative traffic scenario . Projects in the vicinity of the Modified Project Site included in the cumulative background for impact analysis included the Bay Trail and the Chevron®-Richmond Refinery Modernization Project.

In addition to the projections and specific projects described above evaluated in the cumulative impacts analysis, the City prepared a list of under-construction, approved, and pending development projects that the City typically includes in its cumulative impact analysis (City of Richmond, 2019d). This list is presented in **Table 5-1 and** includes existing, approved and pending projects that are anticipated to be either under construction or operational by the time of the completion of the Modified Project.

5.4.3.2 Proposed and Anticipated Development

The City's Southern Shoreline area includes areas south of I-580, and regional open space such as the Miller/Knox Regional Shoreline, the Port of Richmond, and neighborhoods including Point Richmond and Marina Bay. A major overall trend in this part of the City over the past few decades and one that is reflected in larger planning efforts such as Richmond Bay plans described below is the redevelopment of former industrial sites with commercial, office, residential, and other uses. Development trends in the City as a whole are summarized below.

City of Richmond General Plan 2030

The General Plan anticipates that growth demands in the City will be addressed through infill development in the Downtown area, development of underutilized Brownfields parcels within the City's industrial areas, and development along commercial corridors. As estimated in the General Plan, more than 1,200 acres of vacant and underutilized land could be used for infill development within the City.

The General Plan anticipates development within stable areas, conservation areas, and 16 "change areas." These "change areas" would undergo the most drastic change in land uses and would be the focus of development and redevelopment efforts. Many of the stable areas in the City consist of residential neighborhoods. Priority conservation areas in the City include areas with significant natural habitat, open space, and parks and recreational resources.

The General Plan Objectives focus on issues related to physical development, growth, and conservation of resources in the City. The General Plan presents strategies and specific implementing actions to achieve the community's overarching vision and long-term goals. It provides a basis for determining whether specific development proposals and public projects align with the community's vision and long-term goals. City departments, other public agencies, and private developers are encouraged to design projects that will improve community character and quality of life in accordance with particular values and principles defined in the General Plan. Additionally, the General Plan sets forth a basis for developing more detailed plans and implementing programs such as capital improvement plans, the Zoning Ordinance, facilities plans, community needs assessments, and specific plans.

"Buildout" defines full development under the General Plan. The City is characterized by a large amount of underutilized land, which means it is unlikely that the City would buildout within the plan horizon of 20 years (to 2030). Between 1980 and 2005, the City captured 8.4 percent of regional growth. The Association of Bay Area Governments projects that, for the General Plan buildout period, the City will

capture 10.9 percent of regional growth; the EIR prepared for the General Plan assumes that, because one of the primary goals of the General Plan is to stimulate higher intensity development within the City, this proportion could reach 13 percent. Growth projections are focused on areas in which development is likely to occur, such as within the 16 change areas defined by the General Plan. Land uses in the remaining areas of the City would mostly remain stable.

TABLE 5-1
CITY OF RICHMOND DEVELOPMENT PROJECTS LOCATED NEAR THE MODIFIED PROJECT SITE

Project Name	Description of Project	Location Within the City	Environmental Review and Construction Schedule
City of Richmond Studies, Plans, Transportation Projects, and Other Projects			
Housing Element Update	Per State law, the City adopted a comprehensive, long-term General Plan to guide its physical development. The Housing Element is one of seven mandated elements of the General Plan.	Citywide	Adopted May 19, 2015 and certified by State Housing and Community Development Department May 27, 2015
South Richmond Linkage Study PLN14-101	Affordable housing and commercial linkage study for the South Richmond Priority Development Area	South Richmond Priority Development Area	Under review (CEQA Categorical Exemption)
Richmond General Plan 2030 (General Plan Update)	The General Plan provides a comprehensive framework for development within the City. The General Plan contains 15 elements addressing land use, economic development, housing, transportation, climate change, public safety, arts and culture, and open space conservation strategies, as well as a comprehensive element dedicated to community health and wellness.	Citywide	Adopted April 25, 2012. Certified, pursuant to California State Government Code § 65350, May 25, 2012
Richmond Bay Specific Plan PLN15-104	The Specific Plan will establish planning policies, land use controls, development standards, and urban design guidelines that will guide the Plan Area's transformation into a sustainable waterfront community anchored by the planned Berkeley Global Campus at Richmond Bay. Under the Specific Plan, the Plan Area would be developed into several compact, walkable neighborhoods characterized by mixed use commercial and medium-density residential development near public transit, jobs, schools, shopping, parks, recreation, and other amenities, consistent with the goals and policies in the General Plan.	Regatta Boulevard and Marina Way Parkway	Notice of Preparation filed October, 29, 2014. Draft Specific Plan released September 30, 2015. FEIR certified December 6, 2016
San Francisco Bay Trail at Point Molate	Proposed construction of approximately 2.5 miles of a pedestrian and bike trail	From the Richmond-San Rafael Bridge to Point Molate (not including the Project Site)	Mitigated Negative Declaration adopted spring 2018, permits secured summer 2019, construction has not yet begun.
City of Richmond Past Projects (Captured in the Baseline)			
Richmond Wet Weather Storage Project	Construction of a new diversion box, pump station, pipeline, and an aboveground concrete tank	601 Canal Boulevard	Final CEQA Mitigated Negative Declaration approved January 2014; construction completed in 2015.

5.0 CEQA Considerations

	with storage volume of approximately 5 million gallons.		
Artisan Cove Live Work (Phase 3)	Artisan Cove has been designed for the entrepreneur, artisan, and artist who require a high quality work space together with a quality living unit. Consists of 19 units for live/work purposes.	901 Marina Way South	Leasing began January 1, 2019.
The Point Apartments	Located within the historic small "downtown" of Point Richmond, this 3 story multi-family residential development consists of 28 units.	403 S. Garrard Boulevard	Built in 2017.
Miraflores Senior	80-unit development of affordable senior housing. 79 of the apartment units will be a 1 bedroom/1 bathroom layout, approximately 570 square feet each.	150 South 45th Street	Construction completed in March 2018.
Bay Area Rapid Transit (BART) Garage Food Hall/Co-biz	Commercial development of 12,039 square feet comprising of numerous food vendors and a workspace for professionals.	1503 Macdonald Avenue	Construction completed in 2019. Food Hall opened in May 2019.
Chevron Modernization Project PLN11-089	Conditional use permit and revised EIR application.	100 Chevron Way	Approved June 9, 2014.
Miller/Knox Regional Shoreline Public Access Improvements Project	Public access improvements include five new restroom buildings, a new lawn, a new irrigation system and water supply lines, an upgraded new plaza at Ferry Point, four new picnic sites, and new drinking fountains.	Open space adjacent to the Terminal One project site to the north, west, and northeast.	Completed in January 2016.
Richmond Rail Connector	The California Department of Transportation proposed to install a new connector track between the BNSF Railway track and the Union Pacific Railroad (UPRR) tracks in the northern portion of the City to facilitate movement of trains between the two tracks and to avoid train movements through downtown Richmond.	Northern part of Richmond	Project completed in 2015.
Atlas Road Industrial Building (Steelscape) Project PLN14-119	Design review permit and CEQA Mitigated Negative Declaration for a new 772,000 square foot industrial building on the former Steelscape building site.	2995 Atlas Road	Approved in 2015. Construction completed in 2019. No tenant yet.
Richmond-Ohlone Greenway Gap Closure	CEQA Mitigated Negative Declaration for the City's multi-use trail connection between the existing Richmond Greenway (City of Richmond) and Ohlone Greenway (City of El Cerrito). Includes a new multi-use trail, new road and pedestrian improvements, and other improvements.	San Pablo Avenue	Approved July 11, 2013. Project completed in early 2018.
Ferry Point Public Access Improvements Project	Includes Bay Area Water Trail friendly improvements.	Open space adjacent to the Terminal One project site to the west.	Scheduled for 2016. Complete.
Hilltop Spec School PLN14-017	Design review permit and lot line adjustment for a speculative middle and high school in the Hilltop district.	3042 Hilltop Mall Road	Approved July 23, 2014; under construction as of March 7, 2015.
Anchorage at Marina Bay	Conditional use permit, re-zoning,	3400 Jetty Drive	Approved October 7, 2014.

5.0 CEQA Considerations

PLN14-098	and CEQA EIR for a modification of the previously approved Anchorage at Marina Bay residential development.		
Ferry Terminal Project proposed by Water Emergency Transportation Authority	Floating gangway and dock adjacent to Craneway. No new buildings. Generally replacing existing facility. Parking for 266 vehicles.	Ford Peninsula, adjacent to Ford Building along an existing wharf	CEQA Notice of Determination filed September 4, 2014.
Miraflores Greenbelt Project PLN13-276	A sub-project of the greater Miraflores Housing Development, the project will implement a 4-acre greenbelt which includes the daylighting and restoration of 750 linear feet of Baxter Creek, installation of a new creek connection to the City of Richmond's storm drain system, and installation of pedestrian bridge over Baxter Creek.	130 S 47th Street	Approved December 11, 2013; estimated completion date June 30, 2018.
Pinole Point Commerce Center	Development of a one-story, 32-foot-high warehouse industrial building comprised of 203,500 square feet. The development includes warehouse/distribution space, office built-to-suit, and ample parking.	6045 Giant Road	Under construction
City of Richmond Approved Projects/Projects Under Construction			
Terminal One Project	Rezoning, design review permit, EIR and associated approvals for a project including a 316-unit planned area residential development (of which 21 units will be single family homes), new shoreline park, repurposed public pier, Bay Trail loop and other public improvements.	13.3-acre site southeast of the intersection of Dornan Drive and Brickyard Cove Road (1500 Dornan Drive)	Draft CEQA EIR public review period closed March 11, 2016; Final EIR certified and project approved July 5, 2016.
Terraces at Nevin	Construction of a six story, 67 foot high, 271 unit apartment complex consisting of two buildings. Construction comprises of approximately 350,000 square feet, including residential space, common spaces, and parking.	The project site consists of two adjacent parcels separated by 22nd Street ("Site A" and "Site B") on the south side of Nevin Avenue between 21st and 23rd streets in Central Richmond.	Initial Study and Mitigated Negative Declaration dated September 8, 2014. Available for public comment on October 23, 2014.
Lumber Barron	Site improvements and construction of three new buildings, approximately 32,000 square feet, to establish a retail showroom for wood products on a 3.5 acre site.	1140 Harbour Way South	Project approved February 26, 2014. Construction began in late 2017.
Waterline (formally Bottoms Property)	Design review permit, vesting tentative map, General Plan amendment, rezoning, and Environmental Impact Report for 60-unit planned area residential development.	Bounded by Seaclyff Drive (west), Seaclyff Estates Single-family residential neighborhood (north), Canal Boulevard and Port of Richmond Shipyard No. 3 (east), and San Francisco Bay (south).	Planning approvals granted and CEQA EIR certified on December 16, 2014. Construction began in 2015.

5.0 CEQA Considerations

Noma (formally Baywalk)	Project site comprises of approximately 10 acres of land in the Marina Way Neighborhood of Richmond. A total of 193 units (95 townhomes and 98 live/work townhomes) are proposed as a three-story, mixed use development.	830 Marina Way South	Final CEQA Mitigated Negative Declaration approved October 2015.
Filbert Townhomes	Design review permit, conditional use permit, zoning ordinance amendment, and CEQA Mitigated Negative Declaration for a 43-unit residential project at 1200-1300 Filbert Street.	1300 Filbert Street	Approved November 5, 2013.
912 Harbour Way S	Class A Industrial development comprising of 182,000 square feet.	912 Harbour Way South	Construction began in 2019.
The Cascades	Design review permit, conditional use permit, zoning ordinance amendment, and adopting an addendum to a CEQA Mitigated Negative Declaration to construct 46 residential units.	5620 Central Avenue	Approved December 10, 2019
Garrity Way Apartments	Proposed 98 multi-family residential units.	Garrity Way & Blume Drive	Approved March 25, 2019
Miraflores for Sale	The proposed project consists of 22 detached multi-story buildings containing a total of 190 residential units, including 30 moderate-income units, on an 8.17-acre parcel.	The project area is bounded by South 45th Street to the west, Wall Avenue to the south, Interstate 80 to the east, and the BART tracks to the north.	In December 2009, the City Council certified an EIR for the Miraflores project. The project was approved on July 19, 2016.
Quarry Residential	The proposed project includes the development of a residential neighborhood that would consist of up to 193 condominiums in three-story buildings, approximately 300 parking spaces, and associated common areas and amenities. The project would develop approximately 5.5 acres of the site.	1135 Canal Boulevard	A Draft EIR was prepared in October 2017. A Final EIR was prepared in January 2018. FEIR certified February 20, 2018. Project approved February 2018.
3190 Klose	Proposed construction of 7,000 square feet of commercial space.	3190 Klose Way	Approved April 11, 2018
Pt. Pinole Phase III	Development of a one-story, 32-foot-high warehouse industrial building comprised of 162,000 square feet. The development includes warehouse/distribution space, office built-to-suit, and ample parking.	6055 Giant Road	Final Mitigated Negative Declaration issued February 2017.
Hacienda Rehab	Proposed project to upgrade the existing facilities, replace the 150 existing residential units, and inadequate public housing subsidies with project based Section 8 for future residents of the site.	1300 Roosevelt Avenue	Approved on March 21, 2019.
Lifelong Medical	Three-story health center. Construction to replace 4,300 square feet of existing portable buildings with a 3-story 33,742-square-foot health center.	150 Harbour Way	Construction began on February 9, 2019.
PowerPlant Park	Proposes to develop a 215,000-square foot cannabis production facility that would include 45 greenhouses, a nursery, and a processing center. Support facilities would include an office/meeting center, a restaurant, a covered	Northwest corner of Richmond Parkway and Goodrick Avenue	Final Initial Study/Mitigated Negative Declaration released on March 29, 2019.

5.0 CEQA Considerations

	eating area, and guardhouse.		
Shops at Hilltop (Ranch 99 Space Consolidation)	Proposed development for the Asian food supermarket "99 Ranch Market" comprising of 31,765 square feet within the newly developed Shops at Hilltop.	2200 Hilltop Mall Road	Under construction
Home2Suites Hotel	Proposed hotel comprising of 104 rooms.	2020 Meeker Avenue	Approved December 11, 2019
Parkway Commerce Center	Situated on a 7.26-acre site, the proposed 111,000 square foot freestanding warehouse building will provide build-to-suite office spaces.	Giant Road, at the corner of Richmond Parkway and Collins Avenue.	Initial Study and Mitigated Negative Declaration completed in April 2019.
Miller/Knox Regional Shoreline LUPA	EBRPD is considering whether to refurbish one or both buildings at Ferry Point for commercial or passive interpretive use or to demolish the buildings; as well as whether to breach the lower levee of the Lagoon to the Bay, creating a tidal flow regime and a beach or to leave the Lagoon as is and schedule routine dredging.	Open space adjacent to the Terminal One project site to the north, west, and northeast.	Studies completed in 2016. A Final Program EIR was released in January 2019 and Project was approved.
Hilltop Apartments PLN14-211	Design review permit and for a 180-unit, six-story apartment building on a 2.3-acre site.	3080 Hilltop Mall Road	Approved in 2015.
<i>City of Richmond Projects Under Review/Foreseeable:</i>			
Marina Residential Project	399 unit residential project with 1,811 square feet of retail space adjacent to Bay Trail.	830 South Marina Way	Under review as of January 11, 2018.
12 th & Macdonald	Proposed mixed-use project that would include 256 residential condominium units and commercial space, totaling approximately 56,000 square feet development on a 3.83-acre site.	Two block area bound by Macdonald Avenue to the south, Nevin Avenue to the north, 11th Street to the west, and 13th Street to the east ("12th Street and Macdonald Avenue")	Under review
Residence Inn Hilltop Hotel	Proposed hotel with 104 rooms	Hilltop Mall Road, near Blume Drive	Currently under review.
Richmond Country Club Subdivision	Proposed development of 90 single-family homes.	1 Markovich Lane	Currently under review.
UPS Expansion	Proposed design of new 350,000 square foot light industrial building and associated parking lot improvements.	1601 Atlas Road	Mitigated Negative Declaration underway.
Zeneca site cleanup	Remediation of Zeneca site in South Shoreline area.	Richmond South Shoreline area	Feasibility Study/Remedial Action Plan under preparation by DTSC.
BP Neat Ethanol Upgrade PLN14-118	Design review permit for a project that would upgrade the BP Richmond terminal ethanol distribution system to accommodate ethanol with a reduced carbon content	1306 Canal Boulevard	Under review by City of Richmond.
Nystrom Village Redevelopment	The Nystrom Village Family Public Housing and Hacienda Senior Housing sites are owned by the Richmond Housing Authority. Richmond Housing Authority plans to convert the existing housing units from public housing rental to a combination of over 400 homeownership, tax credit, market rate and public housing rentals. Estimated cost for this project is	222 Marina Way South	Under review by City of Richmond.

	approximately \$160 million with funding coming from public and private sources.		
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5.4.3.3 Geographic Scope

The context used for assessing cumulative impacts typically varies depending on the specific topic being analyzed to reflect the different geographic scope of different impact areas. For example, considerations for the cumulative air quality analysis are different from those used for the cumulative analysis of aesthetics.

The geographic scope of the cumulative impact analysis varies depending upon the specific environmental issue area being analyzed. For example, the scope of the cumulative impact analysis for aesthetics includes the area that comprises the viewshed of and from the Project Site, whereas the scope of the cumulative impact analysis for air quality would analyze impacts in the air basin, which is a much larger area. In assessing aesthetic impacts, only development within the vicinity of the Modified Project could contribute to a cumulative visual effect. Alternatively, in assessing air quality impacts, all development within the air basin contributes to regional emissions of criteria pollutants, and basin-wide projections of emissions is the best tool for determining the cumulative effect. Accordingly, the geographic setting and other parameters of each cumulative analysis discussion can vary. **Table 5-2** summarizes the geographic scope of the cumulative impact analysis for each issue area.

5.4.4 SUMMARY OF CUMULATIVELY CONSIDERABLE IMPACTS

CEQA Guidelines § 15130(a) provides the following direction with respect to the cumulative impact analysis and the determination of significant effects.

1. A cumulative impact consists of an impact that is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts.
2. When the combined cumulative impact associated with the project's incremental effect is not significant, the EIR shall briefly indicate why the cumulative impact is not significant and is not discussed further.
3. An EIR may determine that a project's contribution to a significant cumulative effect will be rendered less than cumulative considerable and thus is not significant. A project's contribution is less than cumulatively considerable if the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact.

The following describes cumulative impacts to which the Modified Project would contribute, listed by environmental topic as described in **Section 4.0**. Refer to **Section 4.0** for a detailed discussion of the nature and scope of cumulative impacts.

5.4.4.1 Aesthetics

Impact 4.1.4: Cumulative Aesthetic Impacts. Less than significant cumulative impact to aesthetics and less than significant cumulative contribution to a significant visual cumulative impact.

TABLE 5-2
GEOGRAPHIC SCOPE OF CUMULATIVE IMPACTS

Issue Area	Geographic Area
Aesthetics	Project Site and immediate vicinity
Air Quality and GHG Emissions	Global (GHG emissions), regional (San Francisco Bay Area Air Basin for Air Quality Analysis), and local (Contra Costa County [County] for impacts of TACs)
Biological Resources	Project Site and regional development in western portions of the County
Cultural Resources and Tribal Cultural Resources	Project Site, regional development in the City and western County
Energy	Project Site, City, and County
Geology, Soils, and Minerals	Project Site
Hazards, Hazardous Materials, and Wildfire	Project Site and immediate vicinity
Hydrology and Water Quality	Project Site San Francisco Bay and San Pablo Bay, and other areas within the watershed north of the border created by Interstate 580 and Potrero Ridge, and associated areas of the East Bay Plain Groundwater Basin
Land Use and Planning	Project Site, City, and Bay (consistency with the Bay Plan)
Noise	Project Site, nearby sensitive receptors, areas east of Chevron® and Stenmark Drive and west of Chevron® and Stenmark Drive
Population and Housing	City, County, and San Francisco Bay Area
Public Services and Recreation	City and geography covered by local service providers (public services); City and East Bay (recreation)
Transportation	State, regional, and local facilities in Alameda and Costa Contra Counties
Utilities and Service Systems	City and the service areas of the local utility providers, including the Project Site and adjacent unincorporated area of the City, parts of Alameda and Contra Costa Counties, El Cerrito, Hercules, Pinole, Richmond, San Pablo, and incorporated areas of west Contra Costa County.

5.4.4.2 Air Quality and Greenhouse Gas Emissions

Impact 4.2.7. Generate GHG Emissions, Either Directly or Indirectly, That May Have a Significant Impact on the Environment. Significant and unavoidable cumulative impact with mitigation (**Mitigation Measures 4.2-1, 4.2-2, and 4.2-5**).

Impact 4.2.8. Conflict with an Applicable Plan, Policy or Regulation Adopted for the Purpose of Reducing the Emissions of GHGs. Less than significant cumulative impact with mitigation (**Mitigation Measures 4.2-2, 4.2-3, 4.2-4, and 4.2-5**).

5.4.4.3 Biological Resources

Impact 4.3.8: Cumulative Biological Resources Impacts. Less than significant cumulative impact to biological resources with mitigation (**Mitigation Measures 4.3-1 through 4.3-21, 4.8-1, 4.8-2, 4.10-1, 4.10-5, and BIO-1 through BIO-10**).

5.4.4.4 Cultural Resources and Tribal Cultural Resources

Impact 4.4.5: Cumulative Impact to Cultural, Tribal, and Paleontological Resources. Less than significant cumulative impact to historic, prehistoric, and tribal cultural resources with mitigation (**Mitigation Measures 4.3-2, 4.3-4, 4.3-6, 4.4-2 through 4.4-5, 4.4-7, 4.8-1, 4.8-2, and CUL-1**), and less than significant cumulative contribution to a significant cumulative impact to cultural resources.

5.4.4.5 Energy

Impact 4.5.3: Cumulative Impacts due to Increased Energy Use. Less than significant cumulative impact to energy use.

5.4.4.6 Geology, Soils, and Minerals

Impact 4.6.6: Cumulative Geology and Soils Impacts. Less than significant cumulative impact to geology and soils.

No cumulative impact to mineral resources.

5.4.4.7 Hazards, Hazardous Materials, and Wildfire

Impact 4.7.10: Cumulative Hazardous Material Impacts. Less than significant cumulative impact to hazards, hazardous materials and wildfire with mitigation (**Mitigation Measures 4.7-1 through 4.7-3, and 4.3-13**).

5.4.4.8 Hydrology and Water Quality

Impact 4.8-6: Cumulative Hydrology and Water Quality Impacts. Less than significant cumulative impact to hydrology and water quality with mitigation (**Mitigation Measures 4.8-1 through 4.8-3, HYD-1, and HYD-2**), and less than significant contribution to a significant cumulative impact to hydrology and water quality.

5.4.4.9 Land Use and Planning

Impact 4.9.2: Cumulative Land Use Impacts. Less than significant cumulative impact to land use and planning.

5.4.4.10 Noise

Impact 4.10.8: Cumulative Noise Impacts. Less than significant cumulative impact to noise

5.4.4.11 Population and Housing

Impact 4.11.2: Cumulative Population and Housing Impacts. Less than significant cumulative impact to population and housing.

5.4.4.12 Public Services and Recreation

Impact 4.12.5. Cumulative Public Service Impacts. Less than significant cumulative impact to fire and emergency services, schools, and other public services. Less than significant cumulative contribution to a significant cumulative impact for police services. Less than significant cumulative impact for recreation and parklands with mitigation (**Mitigation Measure 4.12-1**).

5.4.4.13 Transportation

Impact 4.13.9: Conflict with Program, Plan, Ordinance or Policy Addressing Roadways During Operation Assuming Cumulative Plus Project Conditions. Less than significant cumulative contribution to a significant cumulative impact to intersections within City with mitigation (**Mitigation Measure 4.13-1 (b)** and **4.13-1 (c)**). A cumulatively considerable contribution to a significant and unavoidable cumulative impact to intersections outside of City jurisdiction with mitigation (**Mitigation Measure 4.13-1 (a)**, **4.13-1 (d)**, **4.13-1 (e)**, and **4.13-2**).

Impact 4.13.10: Conflict with Program, Plan, Ordinance or Policy Addressing Cumulative Freeway Operations. Cumulatively considerable contribution to a significant and unavoidable cumulative impact with mitigation (**Mitigation Measure 4.13-3**)

Impact 4.13.11: Conflict with Program, Plan, Ordinance, or Policy Addressing Transit, Bicycle, or Pedestrian Facilities During Operation Assuming Cumulative Plus Project Conditions. No significant cumulative impact and less than cumulatively considerable contribution.

Impact 4.13.12: Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) Under Cumulative Plus Project Conditions. No significant cumulative impact and less than cumulatively considerable contribution.

Impact 4.13.13. Result in inadequate emergency access Under Cumulative Plus Project Conditions. Less than significant cumulative impact with mitigation (**Mitigation Measure 4.7-1**).

5.4.4.14 Utilities and Service Systems

Impact 4.14.6. Cumulative Utilities Impacts. Less than significant cumulative impact to energy, water supply, and wastewater with mitigation (**Mitigation Measure 4-14-1**). Less than significant cumulative contribution to a cumulative impact to solid waste services with mitigation (**Mitigation Measure 4.14-2**).

5.5 SIGNIFICANT AND UNAVOIDABLE IMPACTS

Section 15126 (b) of the CEQA Guidelines requires that an EIR describe any significant impacts that cannot be avoided, even with the implementation of feasible mitigation measures. The following is a summary of significant unavoidable adverse impacts related to the Modified Project as described in each issue area contained in **Section 4.0**.

5.5.1 AIR QUALITY AND GLOBAL CLIMATE CHANGE

Impact 4.2.3: Operational emissions including area, energy, mobile, stationary, waste, and water-related emissions would result due to the operation of the Modified Project. Emissions associated with operation of the Modified Project under both the Residential-Heavy and Commercial-Heavy Options (Option 1 and Option 2) would not exceed BAAQMD CEQA thresholds of significance for reactive organic gases and nitrogen oxides after the implementation of **Mitigation Measure 4.2-2**. However, whether **Mitigation Measure 4.2-2 (h)** is feasible is outside the control of the Modified Project Applicant. Tier 4 engines are increasingly the industry standard for water taxis and ferries, and it is reasonable to assume that vessels utilizing this technology will be widely available at the time when ferry service for the Modified Project is implemented. However, the Project Applicant cannot guarantee the availability of such vessels. Accordingly, although **Mitigation Measure 4.2-2 (h)** will likely render operational emissions less than significant, due to the uncertainty discussed above, in an abundance of caution, this impact shall remain significant and unavoidable.

Impact 4.2.7: Operational GHG emissions associated with the Modified Project would result from electrical and natural gas usage, water and wastewater, transportation, and solid waste generation. The City has chosen to set the threshold at zero metric tons of carbon dioxide equivalents per year for this SEIR. Emissions associated with operation of the Modified Project under both the Residential-Heavy and Commercial-Heavy Options (Option 1 and Option 2) would produce GHG emissions in excess of the zero GHG threshold described above, even with the implementation of all feasible mitigation measures. As a result, GHG emissions associated with the Modified Project would remain cumulatively considerable, and this impact would be significant and unavoidable.

5.5.2 TRANSPORTATION

Impact 4.13.2: Under the existing plus project scenario, implementation of the Modified Project would increase the volume of traffic and would adversely impact various intersections during peak commute hours and exceed the level of service (LOS) standards. The implementation of **Mitigation Measures 4.13-1 (a)** and **4.13-1 (e)** would help to reduce impacts at these affected intersections, however as these intersections are not under the jurisdiction of the City, improvements to these intersections might not be achieved by the time the Modified Project begins full operations. As a result, this impact would be significant and unavoidable.

Impact 4.13.3: Implementation of the Modified Project would consequently increase traffic on westbound I-580 during AM peak hours and increase the delay index which currently exceeds the Multi-Modal Transportation Service Objectives (MTSO) of 2.5. The implementation of Mitigation Measure 4.13-3 would help to reduce the impact by requiring payment from commuters to fund freeway improvements, including

improvements to I-580. However, since the City does not control the funding, improvements may not be achieved by the time the Modified Project begins full operations. As a result, this impact would be significant and unavoidable.

Impact 4.13.9: Under the cumulative plus project scenario, implementation of the Modified Project would increase the volume of traffic and would adversely impact various intersections during peak commute hours and exceed the LOS standards. The implementation of **Mitigation Measures 4.13-1 (a), 4.13-1 (d), 4.13-1 (e), and 4.13-2** would help to reduce impacts at these affected intersections. However, as these intersections are not under the jurisdiction of the City, improvements to these intersections might not be achieved by the time the Modified Project begins full operations. As a result, the Modified Project would make a cumulatively considerable contribution to a significant and unavoidable cumulative impact.

Impact 4.13.10: Under the cumulative plus project scenario, implementation of the Modified Project would consequently increase traffic on westbound I-580 during AM peak hours and increase the delay index which currently exceeds the MTSO of 2.5. The implementation of **Mitigation Measure 4.13-3** would help to reduce the impact by requiring payment from commuters to fund freeway improvements, including I-580. However, improvements may not be achieved by the time the Modified Project begins full operations. As a result, the Modified Project would make a cumulatively considerable contribution to a significant and unavoidable cumulative impact.

5.6 IRREVERSIBLE CHANGES

State CEQA Guidelines § 15126.2(c) provides the following direction for the discussion of irreversible changes.

Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.

Resources that would be permanently and continually consumed by implementation of the Modified Project include water, electricity, natural gas, and fossil fuels; however, the amount and rate of consumption of these resources would not result in significant environmental impacts or the unnecessary, inefficient, or wasteful use of resources.

The Modified Project would also result in a temporary increase in car and truck trips during construction, which would be largely reduced during the operational phase. Construction activities related to the Modified Project would result in the irretrievable commitment of non-renewable energy resources, primarily in the form of fossil fuels, natural gas, and gasoline for automobiles and construction equipment.

However, with respect to the operational activities of the Modified Project, compliance with all applicable building codes, as well as mitigation measures, would ensure that all natural resources are conserved to the maximum extent practicable. It is also possible that new technologies or systems would emerge, or would become more cost-effective or user-friendly, and would further reduce the project reliance upon non-renewable energy resources.

The CEQA Guidelines also require a discussion of the potential for irreversible environmental damage caused by an accident associated with the Modified Project. As discussed in detail in **Section 4.7**, completion of the Modified Project with residential, waterfront, and open space land uses would not involve the routine use, transport, storage, or disposal of hazardous wastes other than small amounts of construction chemicals and household cleaners by residents of the Project Site. Therefore, the potential for the completed project to cause significant irreversible environmental damage from an accident or upset of hazardous materials would be less than significant.

SECTION 6.0

ANALYSIS OF ALTERNATIVES

6.0 ANALYSIS OF ALTERNATIVES

6.1 INTRODUCTION

This chapter reviews alternatives to the Point Molate Mixed-Use Development Project (Modified Project) considered during the preparation of this Draft Subsequent Environmental Impact Report (SEIR). The purpose of the alternative analysis, according to California Environmental Quality Act (CEQA) Guidelines § 15126.6(a), is to describe a range of reasonable alternative projects that could feasibly attain most of the objectives of the Modified Project and to evaluate the comparative merits of the alternatives. CEQA Guidelines § 15126.6(b) requires consideration of alternatives that could reduce effects to a less-than-significant level or eliminate any significant adverse environmental effects of the Modified Project, including alternatives that may be more costly or could otherwise impede the Modified Project's objectives. The range of alternatives evaluated in a CEQA document is governed by a "rule of reason," which requires the evaluation of alternatives "necessary to permit a reasoned choice." Alternatives considered must include those that offer substantial environmental advantages over the Modified Project and that may be feasibly accomplished in a successful manner considering economic, environmental, social, technological, and legal factors.

In accordance with CEQA Guidelines, the alternatives considered in this SEIR include those that 1) could accomplish most of the basic objectives of the Modified Project, and 2) could avoid or substantially lessen one or more of the significant effects of the Modified Project. To provide the appropriate context for this alternatives analysis, the project objectives and key significant impacts are summarized in **Section 6.2**. Alternatives initially considered but eliminated from further consideration due to their inability to achieve the Modified Project's objectives and/or to reduce environmental impacts associated with the Modified Project are described in **Section 6.3**. Alternatives determined to achieve the selection criteria are discussed in **Section 6.4**. This discussion evaluates the capacity of selected alternatives to accomplish the basic objectives of the Modified Project and provides a comparison of the potential environmental impacts expected to occur for each issue area. These comparisons are used in **Section 6.5** to determine the Environmentally Superior Alternative required to be identified by CEQA Guidelines § 15126.6(e)(2).

6.2 OVERVIEW OF THE MODIFIED PROJECT

6.2.1 PROJECT OBJECTIVES

The Modified Project has been designed to meet the following objectives.

- Provide a project that is consistent with the Base Realignment and Closure (BRAC) approval and related conditions, as well as with the U.S. Navy (Navy) Record of Decision (ROD) for the transfer.
- Provide a project that supports the vision of the *1997 Point Molate Reuse Plan* (Reuse Plan).
- Provide a variety of residential unit types to create a new residential neighborhood that serves a diverse population and helps to address the State of California and City of Richmond's (City) housing crisis.
- Provide a mix of residential, retail, and restaurant uses that support each other and decrease trips compared to single-use developments.

- Have a positive contribution to the local economy through new capital investment, the creation of new jobs, and the expansion of the tax base.
- Balance economic development with retention and preservation of open space and the rehabilitation of historic buildings;
- Provide open space that preserves sensitive habitat, minimizes ridgeline disturbance, and provides opportunities for passive recreation.
- Implement the portion of the San Francisco Bay Trail (Bay Trail) project along the frontage of the Project Site to increase shoreline recreational opportunities in the City.
- Provide a mix of uses at a density sufficient to fund hazardous material remediation, substantial amounts of open space, and historic rehabilitation and adaptive reuse of the historic buildings in the Historic District;
- Facilitate the early environmental cleanup, redevelopment, and reuse of now vacant and underutilized land in an urban area.
- Provide high-quality architecture that complements existing, historic structures and incorporates sustainable design practices into new buildings and landscaping.
- Provide high-quality, efficient infrastructure to serve the Modified Project.

6.2.2 KEY IMPACTS OF THE MODIFIED PROJECT

The impacts of the Modified Project are evaluated in **Section 4.0** of this Draft SEIR and summarized in **Table 2-1**. Construction of the Modified Project could result in potential short-term impacts associated with soils and geology, hydrology and water quality, biological resources, noise, transportation/traffic, and air quality and greenhouse gas emissions. Project design, regulatory requirements, and mitigation measures would reduce many of the potential short-term impacts to less-than-significant levels. Operation and maintenance of the Modified Project could result in potential long-term adverse impacts associated with geology, soils and mineral resources, hydrology and water quality, noise, and air quality and greenhouse gas emissions. Project design, regulatory requirements, and identified mitigation measures would reduce potential long-term impacts, but not to a less-than-significant level for air quality, greenhouse gas emissions, and transportation.

6.3 ALTERNATIVES ELIMINATED FROM CONSIDERATION

In addition to the alternatives evaluated in **Section 6.4**, the following alternatives and variations in the Modified Project were considered for their potential to reduce the environmental impacts of the Modified Project. These alternatives were preliminarily considered but eventually eliminated from full comparative analysis within the Draft SEIR because they were determined to be infeasible, were unable to meet the objectives of the Modified Project, and/or were not likely to reduce significant environmental impacts of the Modified Project. Alternatives considered, but rejected, are briefly discussed below.

6.3.1 MIXED-USE TRIBAL DESTINATION RESORT AND CASINO (ALTERNATIVE A FROM 2011 FEIR)

The Mixed-Use Tribal Destination Resort and Casino Alternative (Casino Project; previously Alternative A from the Final Environmental Impact Report for the Point Molate Mixed-Use Tribal Destination Resort and Casino Project [2011 FEIR]) consisted of a planned development incorporating historic preservation,

parks and outdoor recreation, open space, tribal cultural/religious facilities, retail, resort hotel amenities, ferry transportation facilities, parking, tribal government buildings, a police substation, a fire station, and a casino. This alternative was eliminated from further consideration as an alternative to the Modified Project as the adverse environmental impacts of this alternative, as described in detail in the 2011 FEIR, would be greater in intensity than those of the Modified Project. For example, the development of a casino would have had greater adverse effects on traffic than the Modified Project. This alternative would not meet the Modified Project's objectives, especially because it lacks a residential component. In addition, this alternative has already been reviewed and not approved by the City Council and the voters of the City recommended that the City Council reject a casino proposal in an advisory referendum.

6.3.2 MIXED-USE TRIBAL DESTINATION RESORT AND CASINO WITH RESIDENTIAL COMPONENT & "PRESERVE BUILDING 6" MIXED-USE TRIBAL DESTINATION RESORT AND CASINO WITH RESIDENTIAL COMPONENT (ALTERNATIVES B & B1 FROM 2011 FEIR)

The Mixed-Use Tribal Destination Resort and Casino with Residential Component Alternative (previously Alternative B of the 2011 FEIR) consists of an identical proposed development as the Mixed-Use Tribal Destination Resort and Casino Alternative with the addition of a residential component of up to 340 units. The "Preserve Building 6" Mixed-Use Tribal Destination Resort and Casino with Residential Component (previously Alternative B1 of the 2011 FEIR) is identical to the previous Alternative B with an additional requirement for City approvals for the subdivision and rezoning for private residential development in order to avoid the demolition of Building 6 located in the Historic District. Alternative B1 was eliminated from further consideration as an alternative to the Modified Project because the adverse environmental impacts of this alternative, as described in detail in the 2011 FEIR, would be greater in intensity than those of the Modified Project. For example, the development of a casino would adversely affect traffic congestion coming in and out of the Project Site, beyond the impacts of the Modified Project. This alternative would not meet the Modified Project's objectives, as it does not meet the vision of the Reuse Plan of 670 housing units. In addition, this alternative has already been reviewed and not approved by the City Council and the voters of the City recommended that the City Council reject a casino proposal in an advisory referendum.

6.3.3 REDUCED INTENSITY MIXED-USE TRIBAL DESTINATION RESORT AND CASINO (ALTERNATIVE C FROM 2011 FEIR)

The Reduced Intensity Mixed-Use Tribal Destination Resort (previously Alternative C of the 2011 FEIR) and Casino is similar to the Mixed-Use Tribal Destination Resort and Casino Alternative. Differences would be that the Point Hotel would not be constructed, the number of rooms in the casino hotel would be reduced to 400, parkland and open space would be increased to 236 acres, the conference and entertainment facilities would be reduced to 50,000 and 30,000 square feet (sq. ft.), respectively, and the retail village would be reduced to 20,000 sq. ft. Although Alternative C incorporated a reduced intensity aspect, greatly decreasing the significant adverse environmental effects of the Project Site, this alternative was eliminated from further consideration as an alternative to the Modified Project because it would not meet the Modified Project's objectives, as it does not meet the Reuse Plan vision of 670 housing units. In addition, this alternative has already been reviewed and not approved by the City

Council and the voters of the City recommended that the City Council reject a casino proposal in an advisory referendum.

6.3.4 TOTAL PARKLAND (ALTERNATIVE E FROM 2011 FEIR)

Under the Total Parkland Alternative (previously Alternative E), the Project Site would be dedicated for use as parkland and open space only. Under this alternative, the Project Site may be accessible by the public for use as a park, subject to the City allocating the necessary funds to make the Project Site suitable for the public. None of the buildings in the Historic District would be demolished, relocated, or rehabilitated (although the existing edifices and structural components would be stabilized), and no new buildings would be constructed. Development under the Total Parkland Alternative would be limited to infrastructure that is necessary to provide basic amenities such as public restrooms. This alternative was eliminated from further consideration because it would not meet the Modified Project's objectives, including providing housing units and would not contribute to the local economy through new capital investment, the creation of new jobs, and the expansion of the tax base.

6.3.5 NO BUILD/COMMUNITY OPEN SPACES & PARK

The No Build/Community Open Spaces & Park Alternative is similar to the Total Parkland Alternative, however this alternative does not include stabilization of the existing historic buildings on the Project Site. As a result, the buildings would eventually be damaged beyond repair, culminating in an adverse effect both environmentally and aesthetically which may be an impact greater than under the Modified Project. In addition, only applicable remediation according to the stipulations set forth in the Water Order R2-2011-0087 of the Project Site would be conducted. In addition, this alternative was eliminated from further consideration as it would not meet the Modified Project's objectives, including providing housing units and would not contribute to the local economy through new capital investment, the creation of new jobs, and the expansion of the tax base.

6.4 ALTERNATIVES EVALUATED IN THIS DRAFT SEIR

This section includes a discussion and comparison of the alternatives analyzed in this Draft SEIR. A reasonable range of alternatives has been selected based on consideration of the purpose of the Modified Project and opportunities for potentially reducing environmental effects. The alternatives selected for consideration are summarized in **Table 6-1** and discussed below in the subsequent sections.

6.4.1 ALTERNATIVE A – NO ACTION ALTERNATIVE

Description

Under Alternative A, the Project Site would continue to be maintained in its current caretaker status with restricted public access, as shown in **Figure 6-1**. The City would not approve any changes to the land use designations or zoning or a development proposal for the Project Site; consequently, no rehabilitation or development would take place. All existing historic buildings would be left in the current state. Additionally, none of the off-site improvements would occur, including the widening of Stenmark Drive. Because the portion of the Bay Trail within the Project Site has been approved, it could occur, but without a project on Point Molate, the City would lack a secured funding source to proceed at this time.

TABLE 6-1
COMPARISON - MODIFIED PROJECT AND ALTERNATIVES CHARACTERISTICS

Footprint or Square Feet of Development	Modified Project		Project Alternatives				
			Alternative A No Action	Alternative B Reduced Intensity Mixed-Use Development (Formerly Alternative D)	Alternative C Base Reuse Plan Alternative	Alternative D Community Plan Alternative	Alternative E Affordable Housing Reduced Intensity Alternative
	Commercial Heavy Option (Option 2)	Residential Heavy Option (Option 1)					
New Housing Units	1,260	1,260	0	1,100	670	0	670
New Development (sq. ft.)	250,000 (commercial, incl. retail/restaurant)	250,000 (307 units; 20,000 sq. ft. retail/restaurant)	0	250,000	0	150,000 (153 room hotel and conference center)	450,000
Reuse of Existing Development (sq. ft.)	374,572 (commercial, incl. retail/restaurant)	374,572 (473 units; 20,000 sq. ft. retail/restaurant)	0	120,000	278,376	374,572 (educational uses)	374,572
Developed Land (acres)	82	82	0	95	78	46	82
Open Space (acres)	193	193	0	180	197	229	193

Ability to Meet Project Objectives

Alternative A does not meet the basic objectives of the Modified Project. Under Alternative A, no new residential uses or park would be developed on the Project Site, and no park and public access improvements would occur. Alternative A would not help fulfill the City's planning goals and vision for the site including restoring the Historic District, nor would it generate tax revenues and provide employment opportunities for the City. While the City has agreed to continue to remediate the Project Site according to Water Order R2-2011-0087, which stipulates that it be remediated to acceptable levels even without the approval of development, the level of remediation would not be stringent enough to allow humans to inhabit the Project Site, which would greatly limit public access to the Project Site. In addition, Alternative A does not meet the requirements for BRAC approval or the Navy ROD for the transfer, as it does not comply with the regulations regarding the protection and rehabilitation of historic buildings on the Project Site.

Summary of Environmental Impacts

Alternative A would eliminate any short-term impacts related to construction activities that would occur as a result of the Modified Project. Impacts associated with noise, traffic, and greenhouse gas (GHG) emissions from construction activities would be avoided. Additionally, since ground-disturbing activities



would not occur, potential impacts to cultural, geological, and biological resources as a result of construction would also be avoided. However, without improvements to the Project Site, the Historic District, an important historic resource, would continue to deteriorate to a state beyond repair. Deterioration of the Historic District under the No Action Alternative would lead to further degradation of the existing visual character of the Project Site and result in impacts to a scenic vista.

Aesthetics

The Historic District is currently in a state of disrepair as a result of deferred maintenance and it would continue to deteriorate as a result of neglect under Alternative A. Any future development would be required to provide for the appropriate treatment of the historic resources located within the Project Site. However, left alone, the historic buildings would continue to deteriorate and may have an adverse effect on a scenic vista. This is a potentially significant impact; however, no feasible mitigation is available due to the lack of a funding source under the No Action Alternative. There is no feasible, legally enforceable mitigation that would lessen the significance of this impact. As such, this is a potentially significant and unavoidable impact. Impacts regarding aesthetics, when compared to the Modified Project, would be greater.

Air Quality and Greenhouse Gas Emissions

Alternative A would eliminate any short-term impacts related to construction activities and operational impacts that would occur as a result of the Modified Project. Impacts associated with air pollution and GHG emissions from construction and operational activities would be avoided. As a result, Alternative A would culminate in a lesser impact regarding air quality and GHG emissions when compared to the Modified Project.

Biological Resources

Ground-disturbing activities would not occur under Alternative A; therefore, impacts to biological resources as a result of construction and operational activities would be avoided. Therefore, Alternative A would have a lesser impact on biological resources when compared to the Modified Project.

Cultural Resources and Tribal Cultural Resources

Without improvements to the Project Site, the current impacts related to the continued deterioration of the Historic District, an important historic resource, would remain ongoing. Impacts to historic resources would be significant. Alternative A would result in a greater impact to cultural resources when compared to the Modified Project because the Modified Project proposes extensive restoration of the Historic District. Because the Modified Project would result in extensive ground-disturbing activities during construction, which would not occur under Alternative A, Alternative A would have a lesser impact to unique archeological and tribal cultural resources when compared to the Modified Project.

Energy

No additional energy use would occur, therefore no impacts would occur under this alternative. While the Modified Project proposes extensive construction and operations resulting in large energy usage,

Alternative A proposes none. Alternative A would result in a lesser impact to energy resources when compared to the Modified Project.

Geology, Soils, and Mineral Resources

The City would be responsible to remediate the Project Site to a level that does not negatively affect the environment, and would monitor soil quality to ensure that conditions do not worsen. However, the level of remediation would not be stringent enough to allow humans to inhabit the Project Site under Alternative A. Unlike the Modified Project, Alternative A would not cause the additional decontamination of soils and remediation of historic buildings on the Project Site, resulting in a potentially greater impact related to soil contamination. However, Alternative A would also mean no further disturbance of soils on the Project Site, such as the creation of substantial soil erosion and loss of topsoils, and the development on unstable and expansive soils, which would impact the Project Site at less-than-significant levels after the implementation of mitigation measures under the Modified Project; therefore, Alternative A would have a lesser overall impact on geology, soils, and mineral resources when compared to the Modified Project.

Hazards, Hazardous Materials, and Wildfire

The City would be responsible to remediate the Project Site to a level that does not negatively affect the environment, and would monitor the former landfill to ensure that conditions do not worsen. However, the level of remediation would not be stringent enough to allow humans to inhabit the Project Site under Alternative A. As a result, impacts related to hazardous materials would be significant. Since under Alternative A, no new construction would occur and no new people would be located at the Project Site, Alternative A would avoid other impacts related to hazards and hazardous materials that would occur as a result of the Modified Project. As a result, Alternative A would have a lesser impact related to hazards and hazardous materials.

Alternative A would not include vegetation management or the construction of a fire station, leaving the Project Site more susceptible to wildfires than under the Modified Project, which would reduce wildfire risk compared to existing conditions by clearing and managing fuel, installing new water infrastructure that supports the pressure needed for fighting fires, installing fire hydrants, constructing a fire station, and stabilizing slopes after a fire. However, Alternative A would not have the environmental impacts related to introducing the infrastructure needed to provide adequate fire protection to new development. Taken together, Alternative A would have similar impacts related to wildfires compared to the Modified Project.

Hydrology and Water Quality

The City would be responsible to remediate the Project Site to a level that does not negatively affect the environment, and would continue to monitor the quality of the groundwater to ensure that conditions do not worsen. However, the level of remediation would not be stringent enough to allow humans to inhabit the Project Site under Alternative A. Impacts related to water quality would be significant. However, due to extensive construction, increase in water usage and output, and higher probability of wastewater runoff as a result of the Modified Project, impacts to hydrology and water quality would be less under Alternative A.

Land Use and Planning

Under this alternative, the Reuse Plan would not be implemented nor would it be consistent with the City's General Plan 2030 (General Plan). As such, housing would not be provided, employment opportunities would not be generated, and the Historic District would not be rehabilitated, whereas the Modified Project aims to provide housing and employment opportunities and to rehabilitate the Historic District. Alternative A would not be consistent with adopted plans and policies for the Project Site, resulting in an impact related to land use and planning greater than the Modified Project.

Noise

No new noise would be generated, as no new structures would be constructed and no new activities would occur. Under Alternative A, noise impacts of the Modified Project would be avoided. As a result, noise-related impacts would be less than the Modified Project.

Population and Housing

No new housing would be constructed and no new population would be generated through any site activities under this alternative. As a result, population and housing-related impacts under Alternative A would be similar to the Modified Project.

Public Services and Recreation

No new demand for public services or recreational facilities would occur under this alternative, as no new structures would be constructed and no new activities would occur. Under Alternative A, public service and recreation impacts would be avoided. As a result, public services and recreation-related impacts would be less than the Modified Project.

Transportation

No new traffic would be generated as no new structures would be constructed and no new activities would occur as a result of the alternative. Under Alternative A, transportation impacts of the Modified Project would be avoided. As a result, transportation-related impacts would be less than the Modified Project.

Utilities and Service Systems

No new demand for utilities would occur under this alternative, as no new structures would be constructed and no new activities would occur. Under Alternative A, impacts of the Modified Project related to utilities and service systems would be avoided. As a result, impacts related to utilities would be less than the Modified Project.

6.4.2 ALTERNATIVE B – REDUCED INTENSITY MIXED-USE DEVELOPMENT (ALTERNATIVE D OF 2011 FEIR)

Description

This alternative was presented and fully analyzed in the 2011 FEIR as Alternative D – Non-Trust Acquisition with Non-Gaming Mixed Use Development. As described in the 2011 FEIR, the Project Site, held in fee status, would be developed with commercial mixed-use and market-rate housing for sale or lease to private individuals and families. As shown in **Figures 6-2a** and **6-2b**, a total of 1,100 residential units are proposed in five locations: near the shoreline, on the hillside, along the San Francisco Bay (Bay), on the shoreline knoll, and in the southern area. Residential uses would occupy approximately 70.5 acres of the Project Site. Roughly two-thirds of the residential units would be medium or high density, with the balance proposed for low density units. The Winehaven Building (Building No. 1) would be rehabilitated per the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings and redeveloped with restaurants, cafes, and retail and small office establishments, totaling approximately 120,000 sq. ft. on two levels. Alternative B would also rehabilitate the historic cottages for live/work units. Other historic buildings, including the Wine Cellar Building (Building No. 6), would be demolished. Hotel and conference facilities, including a 150-room, 100,000-sq. ft., five-story hotel, and a 150,000-sq. ft., two-story conference center would be constructed within the Historic District. In addition, the existing fuel pier would be retrofitted for passenger use and a ferry terminal would be erected. Approximately 180 acres of hillside would be preserved as open space. Open space areas would be maintained primarily in their natural state but would include pedestrian trails, picnic areas, restrooms, and other amenities as are found in regional parks in Alameda and Contra Costa counties. The water supply would be provided via the East Bay Municipal Utilities District (EBMUD) and wastewater would be conveyed to and treated at the Richmond Municipal Sewer District (RMSD).

Ability to Meet Project Objectives

Alternative B meets many of the Modified Project objectives and generally fulfills the vision of the Reuse Plan in that it would provide a positive contribution to the local economy through the creation of new jobs, would preserve a well maintained public park and beach access, as would host numerous restaurant and retail ventures. It would exceed the minimum number of housing units envisioned in the Reuse Plan; ample housing would be provided and much of the Historic District would be restored. In addition to facilitating early environmental cleanup, Alternative B would provide funding for the construction of the Bay Trail, which would be within a 35-acre shoreline park. Furthermore, Alternative B is consistent with the BRAC approval as well as with the Navy ROD for the transfer.

Summary of Environmental Impacts

Similar to the Modified Project, the addition of several high rise buildings such as the hotel and conference center, as well as the addition of housing units, would drastically affect the overall appearance of the Project Site. Alternative B includes more development than any of the other alternatives, however, while it includes the same square footage of new commercial development as compared to the Modified Project, the reuse of existing buildings is less. The area of new development proposed for housing under Alternative B of development would be similar to the Modified Project as housing developments would be spread out between six separate areas throughout the Project Site. However, approximately 13 acres

- A Hillside Open Space
- B Historic Cottages—Adaptively Re-Used for Live/Work
- C Historic Winehaven Building—Adaptively Re-Used as Conference Center and Offices
- D Hotel
- E Northern Residential Neighborhood
- F Single Family Residential Neighborhood
- G Shoreline Park and Trail
- H Ferry Landing/Pier
- I Southern Residential Neighborhood
- J Kayaking Center

PROPOSED OWNERSHIP STATUS

- Tribal Fee Land
- City of Richmond
- City of Richmond Submerged Lands

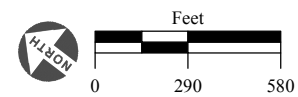




Figure 6-2b
Alternative B – Reduced Intensity Mixed-Use Development Alternative – Site Plan

less than the Modified Project would be reserved for open space, allowing the possibility for additional future development.

Similar to the Modified Project, Alternative B would include considerable construction as well as extensive grading and excavation. This would result in impacts on much of the surrounding environment, including, but not limited to, a rise in noise levels during and after construction, soil erosion, increase in traffic and GHG emissions, as well as the considerable potential for the release of hazardous materials to pollute nearby terrain and waterways. However, while the amount of development (housing units and square feet of non-residential development) proposed for Alternative B is smaller than the Modified Project, the overall amount of developed land would be greater, resulting in a similar or lesser impact under Alternative B on biological resources.

Aesthetics

Alternative B would result in similar aesthetics impacts to the Modified Project. As proposed in the Modified Project, Alternative B also includes the development of retail and commercial space, residential dwellings, reuse of the Historic District, as well as the development of a ferry terminal. Alternative B proposes approximately 160 fewer residential units and approximately 275,000 sq. ft. less reuse of existing structures than the Modified Project, however the proposed housing development is spread out over six different areas as opposed to the more consolidated housing area proposed in the Modified Project. As a result, although the Modified Project would result in the development of more housing and other non-residential uses, and square footage, Alternative B utilizes more of the Project Site affecting more sensitive views, and thus results in a larger overall impact regarding aesthetics when compared to the Modified Project.

Air Quality and Greenhouse Gas Emissions

Alternative B would result in generation of air emissions and GHGs through the construction and operation of the Modified Project. Alternative B would have a similar impact on air quality and GHG emissions as the Modified Project. These impacts include the exposure of sensitive receptors to pollutant concentrations, increased odors as a result of emissions, and the generation of GHG emissions as a result of construction and operations. The implementation of mitigation measures would in most cases reduce impacts to less-than-significant levels, however there are some impacts that are significant and unavoidable even after mitigation measures have been implemented. Because Alternative B involves a lower level of construction activity and fewer GHG emissions as a result of a smaller amount of development as compared to the Modified Project, impacts to air quality and GHG emissions are anticipated to be less under Alternative B.

Biological Resources

Construction proposed under Alternative B would result in significant impacts on biological resources. Mitigation measures proposed for the Modified Project would be required to reduce biological resources impacts under Alternative B. Similar to the Modified Project, the extensive grading and excavation of the Project Site and the construction of new development, such as residential, commercial, and retail spaces, would have an adverse impact on biological resources as a result of Alternative B. However, while the Modified Project proposes more reuse of existing structures and approximately 160 additional residential

units, Alternative B proposes a greater development footprint and approximately 13 fewer acres would be preserved as open space as shown in **Table 6-1**. The greater area of disturbance would result in additional potential impacts to biological resources. As a result, Alternative B would have a similar impact on biological resources when compared to the Modified Project.

Cultural Resources and Tribal Cultural Resources

Similar to the Modified Project, the Historic District would be restored and rehabilitated for adaptive reuse for retail and other commercial purposes. However, Alternative B proposes approximately three times less square footage for reuse, a reduction from the 374,572 sq. ft. proposed by the Modified Project to approximately 120,000 sq. ft. Alternative B proposes to demolish Building No. 6, unlike the Modified Project, resulting in impacts on the Historic District that would not occur under the Modified Project. As a result, Alternative B would have a greater impact on historic resources than the Modified Project. While Alternative B would involve more developed land than the Modified Project, because of the grading areas included in the Modified Project, it would have a greater area of land disturbance than Alternative B; thus Alternative B would have a lesser impact on unique archeological and tribal cultural resources than the Modified Project.

Energy

Energy consumption as a result of the construction and operation of Alternative B and the Modified Project would be potentially significant regarding wasteful, inefficient, or unnecessary consumption of energy resources. Project construction and operation would use energy for fueling vehicles and operating construction equipment and buildings, as well as for water. Mitigation measures proposed for the Modified Project would be required to reduce energy resources impacts under Alternative B. With the addition of housing and commercial and retail space, new energy infrastructure would have to be implemented on the Project Site. Because this alternative would involve a lower level of activity requiring energy use, including fewer housing units and less reuse of the Historic District, Alternative B would have a slightly lesser impact regarding energy usage when compared to the Modified Project.

Geology, Soils, and Mineral Resources

While the square footage of new development is similar compared to the Modified Project, there are approximately 13 additional acres that would be utilized for the purpose of new development. Although there are approximately 160 fewer housing units than proposed in the Modified Project, the housing developments are spread out over six different areas similar to the Modified Project. The various housing areas proposed in Alternative B include sensitive geological areas such as shorelines and hillsides. Additionally, fewer acres are reserved for the purpose of open space under Alternative B, allowing the potential for further future development. As a result, it is assumed that Alternative B would have a greater impact on geology, soils, and mineral resources when compared to the Modified Project.

Hazards, Hazardous Materials, and Wildfire

Alternative B would have a similar impact on hazards, hazardous materials, and wildfire as a result of the construction and operation as compared to the Modified Project. Both Alternative B and the Modified Project would include mitigation to reduce the potential for impacts from transporting hazardous waste

and landslides after a fire, both would include fire safety measures that lower the current risk of wildfire in the area, such as vegetation maintenance plans, and both would include wildfire emergency response plans. .

Hydrology and Water Quality

Similar to the Modified Project, Alternative B also includes the creation of additional impervious surfaces as a result of new development and the potential to adversely impact water quality due to the release of pollutants as a result of construction and operation. While Alternative B would involve more developed land than the Modified Project, because of the grading areas included in the Modified Project, it would have a greater area of land disturbance than Alternative B; therefore, Alternative B would have a lesser impact on hydrology and water quality than the Modified Project.

Land Use and Planning

Similar to the Modified Project, development as a result of Alternative B would not divide any existing communities nor would it conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Additionally, Alternative B proposes to provide 180 acres of open space, approximately 13 acres less than the Modified Project, and would include pedestrian trails, picnic areas, and other park-like amenities. Because Alternative B would have similar land use and acreage developed to the Modified Project, Alternative B would have a similar impact related to land use and planning when compared to the Modified Project.

Noise

Impacts to noise as a result of construction and operation of Alternative B would be both substantial and similar to that found under the Modified Project. Mitigation measures would be implemented to reduce impacts related to noise to a less-than-significant level. However, because Alternative B involves a lower level of construction activity and reduced operational activity as a result of a smaller on-site population and a smaller amount of commercial development, less traffic and ambient noise would result. Therefore, Alternative B would have a slightly lower impact regarding noise when compared to the Modified Project.

Population and Housing

Because Alternative B proposes 160 fewer newly constructed housing units and therefore a smaller growth in population, and because the Modified Project would result in more population, neither Alternative B or the Modified Project would induce unplanned population growth or displace existing residents. Both Alternative B and the Modified Project are consistent with the housing goals and growth projections for the City as stated in the General Plan and thus would have similar impacts on population and housing.

Public Services and Recreation

Both Alternative B and the Modified Project would increase the population, employment options, and the need for public services such as schools, fire protection, medical services, law enforcement, water utilities, natural gas, electricity demands, and infrastructure. The City or its service providers should be able to adequately provide these services to the Project Site and its population. Alternative B proposes to

provide 180 acres of open space, approximately 13 acres less than the Modified Project, which is allocated for the purpose of habitat preservation and recreation. However, mitigation measures proposed for the Modified Project would be required to reduce impacts to existing neighborhood and regional parks and other recreational facilities as a result of physical deterioration due to anticipated increased usage; the same mitigation measures would be implemented under Alternative B. Additionally, construction or expansion of recreational facilities may be necessary which could have the potential to create an adverse physical effect on the environment similar to the Modified Project. As a result, Alternative B would have a similar impact on public services and recreation when compared to the Modified Project.

Transportation

Under Alternative B and the Modified Project, street widening is proposed to adequately provide for the influx of people and cars. While Alternative B and the Modified Project Option 2 both propose the same square footage of newly constructed commercial development, Modified Project Option 2 includes more commercial space due to the reuse and rehabilitation of all historic buildings rather than a selected few, and the number of proposed housing units in Alternative B is less than the Modified Project. As a result, Alternative B is anticipated to have a lesser impact on transportation than the Modified Project.

Utilities and Service Systems

Both Alternative B and the Modified Project require the use and implementation of utility services. This would include additional underground piping for water supply and release, stormwater drainage, electric power, and telecommunications facilities. The Modified Project, under Wastewater Variant A however, proposes an optional new WWTP which is not proposed under Alternative B. However, mitigation measures proposed for the Modified Project such as the relocation or construction of new or expanded water and wastewater piping, relocation or construction of new or expanded electric power, natural gas, or telecommunication facilities would be required to reduce impacts under Alternative B. Alternative B has proposed multiple residential areas similar to that proposed under the Modified Project, which would require both to possess a large amount of infrastructure, such as sewer and water lines and drainage facilities, to adequately serve the Project Site. Therefore, it is anticipated that impacts related to utilities would be similar when compared to the Modified Project.

6.4.3 ALTERNATIVE C – BASE REUSE PLAN ALTERNATIVE

Description

Alternative C would include the rehabilitation of almost all of the contributors to the Historic District (see **Figure 6-3**) per the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings, with the allowance that Buildings No. 6 and 17 may be demolished if they cannot be economically upgraded and maintained to meet current building code and seismic requirements. Development would occur in four main locations. Within the Core Historic District and Northern Development Area, historic buildings, to the maximum extent feasible, and Building No. 123 would be used for a Mixed-Use Village containing a combination of winery, commercial, entertainment, cultural, and educational uses, special light industrial, and overnight uses if Building No. 6 is maintained.

If Building No. 6 is demolished, the special light industrial uses would be replaced with 126 single-family homes. Alternative C assumes Building No. 6 would be demolished because it has suffered significant water damage that would be costly to repair. New development is permitted in the Northern Development Area. Another 544 residential units would be located in new development in the Central Development Area and Southern Development Area, for a total of up to 670 residential units on the Project Site. Consistent with the Reuse Plan, approximately 30 percent of the land would be used for development while the remaining 70 percent would be reserved for open space. The City would continue to maintain the beach park and surrounding open space. The water supply would be provided via EBMUD and wastewater would be conveyed to and treated at the RMSD.

Ability to Meet Project Objectives

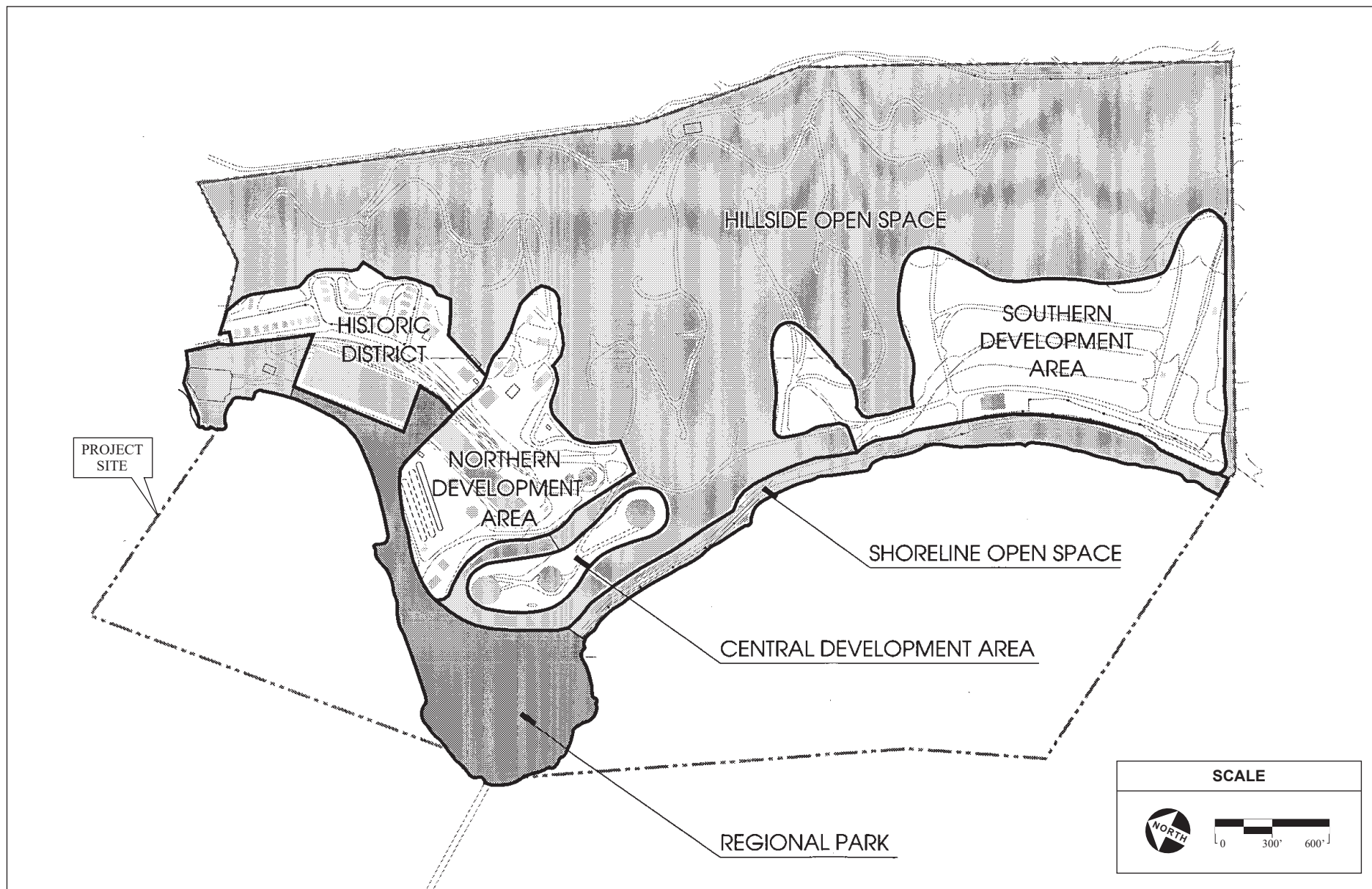
Alternative C would have the ability to meet some of the objectives of the Modified Project, although to a lesser degree pertaining to local economic benefits and job creation. While this alternative would result in the rehabilitation of some of the historic buildings and would accommodate 670 residential units, as envisioned by the Reuse Plan, Alternative C would not rehabilitate Building No. 6 and no new retail or commercial buildings would be constructed. The beach park and surrounding open space would be maintained as-is, resulting in minimal environmental cleanup and limiting future uses of the land.

Because Alternative C includes rehabilitation of most of the Historic District, a National Register of Historic Places-listed site, it meets the requirements for BRAC approval and the Navy ROD for the transfer.

Summary of Environmental Impacts

Compared to the Modified Project, there would be little adverse environmental impact under Alternative C. Fewer new buildings would be constructed under the alternative and a majority of the standing buildings within the Historic District would be rehabilitated and adaptively reused for residences. However, unlike the Modified Project, up to two of the contributing buildings of the Historic District could be demolished (Buildings No. 6 and 17), resulting in an impact that would not occur under the Modified Project. Overall, the footprint of the Project Site would include minimal change under Alternative C. By providing housing by way of already existing and newly restored buildings, as well as housing development located within the Central and Southern Development Areas, minimal construction would be required. In addition, 70 percent of the Project Site would be utilized as open space, preserving the natural resources with routine maintenance and upkeep and promoting recreational activities that both satisfies the public and protects the invaluable terrain and shoreline of Point Molate.

Compared to the Modified Project, Alternative C involves minimal construction, including approximately 116,196 fewer sq. ft. of Historic District building rehabilitation, as well as no new commercial development, and approximately half the number of newly constructed residential units. Because Alternative C would have minimal increased footprint, impacts related to disturbance such as biological resource impacts, buried cultural resources impacts, or erosion impacts, would be less under this alternative. Since construction activities for rehabilitating and reusing the existing historic buildings would be less than under the proposed Modified Project, impacts related to construction, GHGs, noise, and



traffic would be reduced. The reduced amount of activity on the Project Site following construction compared to the Modified Project would reduce impacts related to traffic, noise, air, and GHG emissions. Less new construction would reduce aesthetic impacts, but demolition of two of the contributing buildings of the Historic District would result in a significant impact to a historic resource that would not occur under the Modified Project.

Aesthetics

Alternative C would result in reduced aesthetics impacts as compared to the Modified Project because it involves less new construction, and would thus reduce the chance of changes to scenic vistas; it would also be a smaller source of new light. Both Alternative C and the Modified Project would be consistent with policies in the General Plan and Zoning Code governing scenic quality. Considering all of the aesthetic significance criteria, Alternative C would have a lesser impact on aesthetics in comparison to the Modified Project.

Air Quality and Greenhouse Gas Emissions

Alternative C would result in generation of air emissions and GHGs through construction and operation. Alternative C assumes that Buildings No. 6 and 17 would be demolished, and thus would utilize approximately 116,196 fewer sq. ft. of existing buildings. Additionally, the Modified Project proposes twice as many newly constructed residential units as compared to Alternative C. As a result, Alternative C would have a lesser impact on air quality and GHG emissions in comparison to the Modified Project.

Biological Resources

Construction proposed under Alternative C would result in significant impacts on biological resources. Mitigation measures proposed for the Modified Project would be required to reduce biological resources impacts under Alternative C. However, since the Modified Project proposes a larger footprint of development, including new retail/restaurant development and twice as many newly constructed housing units, Alternative C would have a lesser impact on biological resources in comparison to the Modified Project.

Cultural Resources and Tribal Cultural Resources

Alternative C would result in fewer impacts to archaeological and tribal cultural resources when compared to the Modified Project due to its smaller footprint, but a much larger adverse impact to historic resources. Both Alternative C and the Modified Project propose to rehabilitate the buildings in the Historic District, however Alternative C proposes to demolish two contributors to the Historic District, resulting in a significant and unavoidable impact to the Historic District that would not occur under the Modified Project. Considering impacts to all cultural resources as a whole, Alternative C would have a greater impact on cultural resources in comparison to the Modified Project.

Energy

Under Alternative C, 670 housing units be would constructed by rehabilitating and adaptively reusing all but two historic buildings in the Historic District and constructing two additional new developments areas located within the Central Development Area and the Southern Development Area, resulting in the

increased demand for energy resources compared to existing conditions to adequately accommodate the project. However, because Alternative C proposes less development than the Modified Project and therefore a reduced demand for energy resources, Alternative C would have a lesser impact on energy resources and consumption in comparison to the Modified Project.

Geology, Soils, and Mineral Resources

The square footage for rehabilitation and reuse of the Historic District is approximately 116,196 sq. ft. less than the Modified Project, and no new commercial development is proposed under Alternative C.

Compared to the Modified Project, Alternative C would have more pervious surfaces and require less ground disturbance. As a result, Alternative C would have a lesser impact on geology, soils, and mineral resources in comparison to the Modified Project.

Hazards, Hazardous Materials, and Wildfire

Alternative C would have a lesser impact on hazards, hazardous materials, and wildfire as a result of the construction and operation when compared to the Modified Project. Both Alternative C and the Modified Project would include mitigation to reduce the potential for impacts from transporting hazardous waste, but due to the fact that Alternative C requires less construction, there would be less disturbance of contaminated soil and transport of hazardous materials during construction, reducing the risk of an accidental release. Both Alternative C and the Modified Project would include fire safety measures that lower the current risk of wildfire in the area, such as vegetation maintenance plans and wildfire emergency response plans. Alternative C would result in fewer people on the Project Site, making coordination in the event of an emergency slightly easier. In conclusion, Alternative C would have a lesser impact related to hazards, hazardous materials, and wildfire when compared to the Modified Project.

Hydrology and Water Quality

Due to the construction of 670 housing units through the reuse of a portion of the Historic District and new development in the Central Development Area and Southern Development Area, and the subsequent increase in population, impacts related to hydrology and water quality would be significant. However, due to the more extensive construction involved, the Modified Project would have a greater increase in water use and output, and more impervious surfaces with a higher probability of wastewater runoff as compared to Alternative C. As a result, impacts to hydrology and water quality would be less under Alternative C.

Land Use and Planning

Alternative C meets the vision articulated in the Reuse Plan, including the implementation of 670 housing units and the rehabilitation of the majority of the contributing buildings to the Historic District. However, the City's General Plan desires rehabilitation or adaptive reuse of all of the buildings that contribute to the Historic District. Neither Alternative C nor the Modified Project would physically divide an established community. Overall, Alternative C would have similar impacts related to land use and planning in comparison to the Modified Project.

Noise

Noise would be generated during construction and operational activities as a result of Alternative C. However, construction and operational activities proposed under the Modified Project would be greater than proposed by Alternative C. As a result, Alternative C would result in a lesser impact regarding noise in comparison to the Modified Project.

Population and Housing

Because Alternative C proposes many fewer housing units, it would result in a smaller growth in population than the Modified Project. Neither Alternative C nor the Modified Project would induce unplanned population growth or displace existing residents. Both Alternative C and the Modified Project are consistent with the City's goals to add housing to the Project Site and would accommodate growth anticipated by the General Plan, and would thus have similar impacts on population and housing.

Public Services and Recreation

As a result of Alternative C, there would be an increase in population as well as a need for public services such as schools, fire protection, medical services, and law enforcement. The City should be able to adequately provide these services to the Project Site under this alternative. The Modified Project would result in a greater population increase than Alternative C, and thus have a greater demand on public services and recreation areas. As a result, Alternative C would result in a lesser impact to public services and recreation when compared to the Modified Project.

Transportation

With the addition of 670 housing units, traffic would be generated as a result of Alternative C, however no street widening or public transportation is proposed. The Modified Project proposes extensive construction, including widening of Stenmark Drive to adequately accommodate its population, construction of a new ferry terminal, and a shuttle service to transport its residents in and out of the Project Site. As a result, Alternative C would result in a lesser impact related to transportation when compared to the Modified Project.

Utilities and Service Systems

As a result of limited housing development and minimal construction proposed under Alternative C, utilities such as water and electricity are assumed to be provided by the City, and no extensive new infrastructure would be needed, although a wastewater pipe would need to be added and the existing infrastructure would likely need to be fixed and/or modernized. The Modified Project would result in a greater the demand for utilities than Alternative C and would require much more extensive utility upgrades to serve new residents and employees than required by Alternative C. Subsequently, Alternative C would have a lesser impact on utilities when compared to the Modified Project.

6.4.4 ALTERNATIVE D – COMMUNITY PLAN ALTERNATIVE

Description

Alternative D is the plan developed by the Point Molate Alliance (PMA), one of the community groups, and was presented to the public by the PMA in 2018. Under Alternative D, the Historic District would be fully rehabilitated and the Point Molate public beach access would be improved. The Historic District would be rehabilitated in compliance with the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings for adaptive reuse as commercial and educational facilities. In addition, this alternative includes a new 153-room boutique hotel, restaurants, and conference center, totaling approximately 150,000 sq. ft., as shown in **Figure 6-4**. The remainder of the Project Site would be a park, and would include playing fields, watercraft recreation, cycling opportunities, picnic areas, camping locations, and hiking trails. Alternative D would rehabilitate Building No. 6 and no housing would be developed on the Project Site. In addition to the commercial and hospitality uses proposed for the Historic District, Alternative D includes the revitalization of the existing public beach park and would use the area termed by the community groups the “South Valley” and bluffs for a park as shown on **Figure 6-4**.

Ability to Meet Project Objectives

Alternative D would meet most of the Modified Project objectives in that it would provide mixed-use development for commercial and retail enterprises. It would also include reuse and rehabilitation of the Historic District as well as preservation and promotion of natural resources through open space as envisioned in the Reuse Plan. However, while consistent with the BRAC approval and the Navy ROD for the transfer, Alternative D does not meet the objective to provide housing.

Summary of Environmental Impacts

Similar to the Modified Project, Alternative D includes rehabilitation and adaptive reuse of the Historic District for a mix of purposes, although unlike the Modified Project, that mix includes educational uses. Also unlike the Modified Project, Alternative D does not include any residential uses because the PMA wants to direct new housing development to downtown Richmond and Priority Development Areas. Further unlike the Modified Project, new construction under Alternative D would be used for a boutique conference hotel. Because Alternative D would result in the majority of the Project Site remaining in open space or otherwise undeveloped, it would have a lesser adverse environmental impact. While the construction under Alternative D would increase noise levels, traffic volume, and GHG emissions, the amount of construction would be much less than under the Modified Project, greatly reducing impacts and energy use during construction. Alternative D also would reduce operational impacts because it proposed to develop the Project Site less intensely than the Modified Project.

Aesthetics

Alternative D would result in fewer impacts to aesthetics when compared to the Modified Project because it would leave more of the Project Site undeveloped, thereby decreasing the chance of altering a scenic vista. Although the reuse of existing development would be the same as the Modified Project, including rehabilitation and adaptive reuse of the Historic District, new development would be located within previously developed areas in the Historic District, resulting in a smaller footprint than the Modified



SOURCE: City of Richmond, 2019; AES, 1/8/2020

Point Molate Mixed-Use Development SEIR / 216544 ■

Figure 6-4
Alternative D – Community Plan Alternative – Site Plan

Project. As a result, Alternative D would result in a lesser impact in regards to aesthetics when compared to the Modified Project.

Air Quality and Greenhouse Gas Emissions

Alternative D would result in the generation of air emissions and GHGs from construction and operational activities. While Alternative D and the Modified Project would utilize the same square footage of existing buildings, the Modified Project proposes more new construction than Alternative D (250,000 sq. ft. vs. 150,000 sq. ft.). In addition, the Modified Project proposes the construction of 1,260 new residential units. This would result in the Modified Project having a greater amount of construction activity, a greater population at operation, and mobile source and point source emissions than the alternative. Therefore, Alternative D would have a lesser impact on air quality and GHG emissions when compared to the Modified Project.

Biological Resources

Construction under Alternative D would result in significant impacts on biological resources. Mitigation measures proposed for the Modified Project would be required to reduce biological resources impacts under this alternative. However, since the Modified Project proposes a much larger footprint of development, which utilizes much more of the Project Site, Alternative D would have a lesser impact on biological resources when compared to the Modified Project.

Cultural Resources and Tribal Cultural Resources

Alternative D would result in similar cultural resources impacts when compared to the Modified Project. Alternative D and the Modified Project include rehabilitation and adaptive reuse of all of the buildings that contribute to the Historic District. Additionally, both the Modified Project and Alternative D could cause adverse impacts to potential archaeological resources, human remains, and tribal cultural resources that have either been uncovered or have not yet been found, but Alternative D would disturb less ground, reducing potential impacts to archaeological and tribal cultural resources. Overall, Alternative D would have a similar impact on cultural resources when compared to the Modified Project.

Energy

Alternative D does not include the construction of any housing units on the Project Site, however, new uses, including a 153-room boutique hotel, a conference center, and an educational facility would be located within the boundaries of the Historic District. While Alternative D and the Modified Project would utilize the same square footage of existing historic buildings, the Modified Project proposes an additional 1,260 new residential units and 100,000 sq. ft. of new construction compared to Alternative D, which would result in the increased demand for energy resources for the Modified Project. This would result in a greater amount of construction activity and a greater population at operation, as well as an increased demand for energy resources. Alternative D would have a lesser impact on energy resources and consumption in comparison to the Modified Project, although neither project would use energy in a wasteful or inefficient manner.

Geology, Soils, and Mineral Resources

Alternative D would result in less developed land than the Modified Project by approximately 36 acres. Consequently, less grading would be required for development, and a lower risk of potentially impacting top soils would exist. Furthermore, less disturbance due to grading and overall development would reduce the potential of inducing geological risks onsite, such as landslides, and impacting unknown paleontological resources. Alternative D would have the same susceptibility to seismic and unstable soils as the Modified Project due to the geological characteristics of the Project Site. As a result, Alternative D would have less of impacts on geology and soils compared to the Modified Project. Neither the Modified Project nor Alternative D would impact mineral resources, as none exist on the Project Site.

Hazards, Hazardous Materials, and Wildfire

Due to the decreased development size of Alternative D compared to the Modified Project, the use, storage, and transport of hazardous materials would be less. Alternative D would therefore have less of an impact related to hazards and hazardous than the Modified Project. The Cortese List (a list of sites regulated by the California Environmental Protection Agency) identified contaminated locations onsite, and remediation of the Project Site would be required per San Francisco Bay Regional Water Quality Control Board (SFBRWQCB), Order No. R2-2011-0087 prior to commercial or residential development onsite. The potential of hazardous material exposure during remediation and the transport of contaminated materials would be similar to the Modified Project. Therefore, these impacts would be the same.

The Project Site is located within a Very High Fire Hazard Severity Zone and has other natural conditions, such as wind and steep hillsides, which make it highly susceptible to wildfire risk. Both Alternative D and the Modified Project would include fire safety measures that lower the current risk of wildfire in the area, such as vegetation maintenance plans, new fire hydrants, and new water facilities that meet fire code requirements for water pressure, and would include wildfire emergency response plans. Alternative D would not include a new fire station, which could lead to increased response times to the Project Site during a fire, but also would have fewer people to coordinate during an emergency. The wildfire impacts would be similar.

Overall, Alternative D would have a smaller impact related to hazards, hazardous materials, and wildfire in comparison to the Modified Project.

Hydrology and Water Quality

Similar to the Modified Project, Alternative D includes the creation of additional impervious surfaces as a result of new development and also has the potential to adversely impact water quality due to the release of pollutants as a result of the construction and operations. Consequently, Alternative D would require mitigation measures similar to the Modified Project to reduce these impacts to a less-than-significant level. However, Alternative D would involve less development than the Modified Project, and would not include housing or an on-site WWTP as would be included under Wastewater Variant A of the Modified Project. Therefore, the impacts of Alternative D would be less than the impacts of the Modified Project, because the reduced development would not affect drainage as much, less impervious surfaces would be built, less potential pollution would be introduced during construction and operation, and less

water-related resources would be used. Overall, Alternative D would have less of an impact on water resources when compared to the Modified Project.

Land Use and Planning

Alternative D does not propose to construct any new roadways or aboveground infrastructure through existing communities. No residential uses exist on the Project Site, as it is surrounded by industrial uses, water, and undeveloped land. There are no communities on the Project Site or its vicinity. Therefore, similar to the Modified Project, Alternative D would not physically divide an established community. No impact would occur.

Similar to the Modified Project, Alternative D would require rezoning and would conflict with select land use plans in effect for the Project Site. Alternative D would involve a General Plan Amendment and rezoning to change the Project Site General Plan land use designation and zoning designations to be consistent with the development proposed. However, Alternative D would be consistent with other land use policies, such as the Reuse Plan and the San Francisco Bay Plan (Bay Plan). As discussed in **Section 4.9.3**, the Reuse Plan proposes the rehabilitation and adaptive reuse of the Historic District and retention of 70 percent of the Project Site's open space. Alternative D would preserve the on-site historical buildings, would retain approximately 229 acres of the Project Site as open space, and would incorporate ideas from the proposed reuse potential described in the Reuse Plan in the development areas. While inconsistent with those elements of the Bay Plan that are beyond the Bay Conservation and Development Commissions (BCDC) jurisdictional boundaries, Alternative D would be consistent with applicable recreation policies from the Bay Plan because similar recreational facilities would be provided in the alternative as the Modified Project, and the Modified Project was found to be generally consistent with the Bay Plan (**Appendix O**) within those areas subject to BCDC jurisdiction. Therefore, similar to the Modified Project, Alternative D would not conflict with the Reuse Plan or the Bay Plan, resulting in a similar impact on land use and planning.

Noise

The sources of noise and ground-borne vibration generated by construction of Alternative D would be similar to that determined for the Modified Project, although the scale of noise and vibration generated would be less than the Modified Project due to the smaller footprint of development and the absence of residents under Alternative D. However, construction of the Alternative D could still generate an increase in ambient noise levels and ground-borne vibrations, and consequently create a potentially significant impact to nearby receptors. Furthermore, ground-borne vibration could damage the Historic District. This could be a significant impact to historical resources. Mitigation measures similar to those specified in **Section 4.10.6** for the Modified Project would need to be implemented to reduce impacts related to construction noise and ground-borne vibrations to a less-than-significant level.

During operations, Alternative D would generate an increase in ambient noise (e.g., heating, ventilating, and air conditioning [HVAC] systems), but less than the Modified Project due to the smaller amount of development and the smaller increase in traffic volume due to less development and no housing. The increase in noise would primarily result from the increase in traffic, but some noise would also be generated from on-site sources (e.g., building HVAC systems). Increased traffic would impact both on-site

and off-site sensitive receptors while only on-site receptors could be impacted by on-site noise generation. However, Alternative D would have fewer on-site sensitive receptors because no housing units would be constructed onsite. To reduce the potential impacts from increased ambient noise levels from on-site sources and traffic, Alternative D would need to implement mitigation measures similar to those specified for the Modified Project. Implementing these mitigation measures would reduce these impacts to less-than-significant levels. Overall, Alternative D would have less of an impact related to noise in comparison to the Modified Project.

Population and Housing

There are currently no housing or people on the Project Site that could be displaced by Alternative D. Therefore, Alternative D, similar to the Modified Project, would not displace substantial numbers of people or housing that would necessitate the construction of replacement housing elsewhere. There would be no impact.

Alternative D would not lead to future population growth because no housing units would be constructed onsite. Alternative D is not intended to promote unplanned growth because the proponents of Alternative D would encourage housing to occur in downtown and City Priority Development Areas. Alternative D would create more jobs than Option 1 of the Modified Project, but fewer jobs than Option 2 of the Modified Project. Given the types of jobs that hotels and educational uses create, it is unlikely that Alternative D would indirectly encourage substantial unplanned growth in the City. However, unlike Option 2 of the Modified Project, Alternative D would not provide any housing for its new workers. The Modified Project would also not promote unplanned growth because the City needs housing and has planned that the redevelopment of the Project Site would include residences. Alternative D would have a similar impact related to population and housing in comparison to the Modified Project.

Public Services and Recreation

The development of Alternative D would result in the increased need for public services. As discussed in **Section 4.12.3**, fire protection and emergency medical services are provided by the Richmond Fire Department and police services are provided by the Richmond Police Department. While Alternative D would generate fewer service calls for fire and police services when compared to the Modified Project because of the fewer anticipated users of the Project Site and the absence of residents, Alternative D would not include the construction of an on-site joint police and fire station to serve the Project Site. Therefore, all service calls would be answered by off-site personnel. This could result in longer response times for fire protection services.

The development of the Alternative D is not anticipated to result in the increase of school-aged children in the City, because Alternative D would result in no new housing units on the Project Site. Overall, Alternative D would have less of an impact on public services and recreation when compared to the Modified Project.

Transportation

Traffic generated as a result of the construction of Alternative D would be similar to that determined for the Modified Project, although the scale of traffic generated would be lower than the Modified Project due

to the smaller amount of development and the absence of housing under Alternative D. However, construction of Alternative D could still generate an increase in traffic. The Modified Project, however, proposes extensive construction, including widening of Stenmark Drive in order to adequately accommodate for the influx of people and cars, the construction of a new ferry terminal, and a shuttle service to transport its residents to and from the Project Site. Alternative D would result in a lesser impact related to transportation in comparison to the Modified Project.

Utilities and Service Systems

As a result of no housing development and less construction proposed under Alternative D, not as much new infrastructure would need to be created due to a lower demand for utilities, although a new wastewater treatment pipe would be needed to connect the Project Site to the City's wastewater treatment plant and water lines likely would need to be repaired or modernized. However, because the Modified Project would more intensely develop the Project Site, it would have a greater demand on utilities. Subsequently, Alternative D would have a lesser impact on utilities when compared to the Modified Project.

6.4.5 ALTERNATIVE E – AFFORDABLE HOUSING REDUCED DENSITY ALTERNATIVE Description

Alternative E, formerly known as Equitable Development of Point Molate, is another community proposed plan developed by a mix of City residents, development professionals, and legal experts, who in 2018 formed the Richmond Community-owned Development Enterprise. Under Alternative E, the Project Site would be used for residential, light industrial, and educational purposes and would include recreational spaces in the form of parks, bike trails, beach access, a boardwalk, play structures, and picnic areas, among other things, as shown in **Figure 6-5a** and **Figure 6-5b**. Under Alternative E, the contributing buildings to the Historic District would be rehabilitated and used for affordable housing, including artist residences, and a youth restorative justice center. The Winehaven Building (Building No. 1), which lacks windows and cannot be used for residences, would be rehabilitated and used for a museum. Additionally, approximately 450,000 sq. ft. of new, neighborhood-serving commercial development and public-serving recreation, hospitality, and entertainment uses would be constructed on the Project Site. This development would include food hubs, a boardwalk, a conference and retreat center, a music and entertainment venue, a water recreation kiosk, and activities. Alternative E would also implement new public transportation systems, including ferry services and shuttles within the Project Site. Furthermore, the South Development Area, as shown in **Figure 6-5b**, would be placed in a community land trust and may include a community center, sports fields, indigenous meeting space, camping areas, trails, and gardens, which would be decided through future public planning. Approximately 70 percent of the Project Site would be allocated to open space.

Ability to Meet Project Objectives

Under Alternative E, the Historic District would be rehabilitated and would provide an adaptive reuse of the space, including a mix of residential, educational, commercial, and hospitality developments, fulfilling the fundamental vision of the Reuse Plan and Modified Project objectives. Approximately 70 percent of the land would be allocated to open space and would include recycled water infrastructure as well as

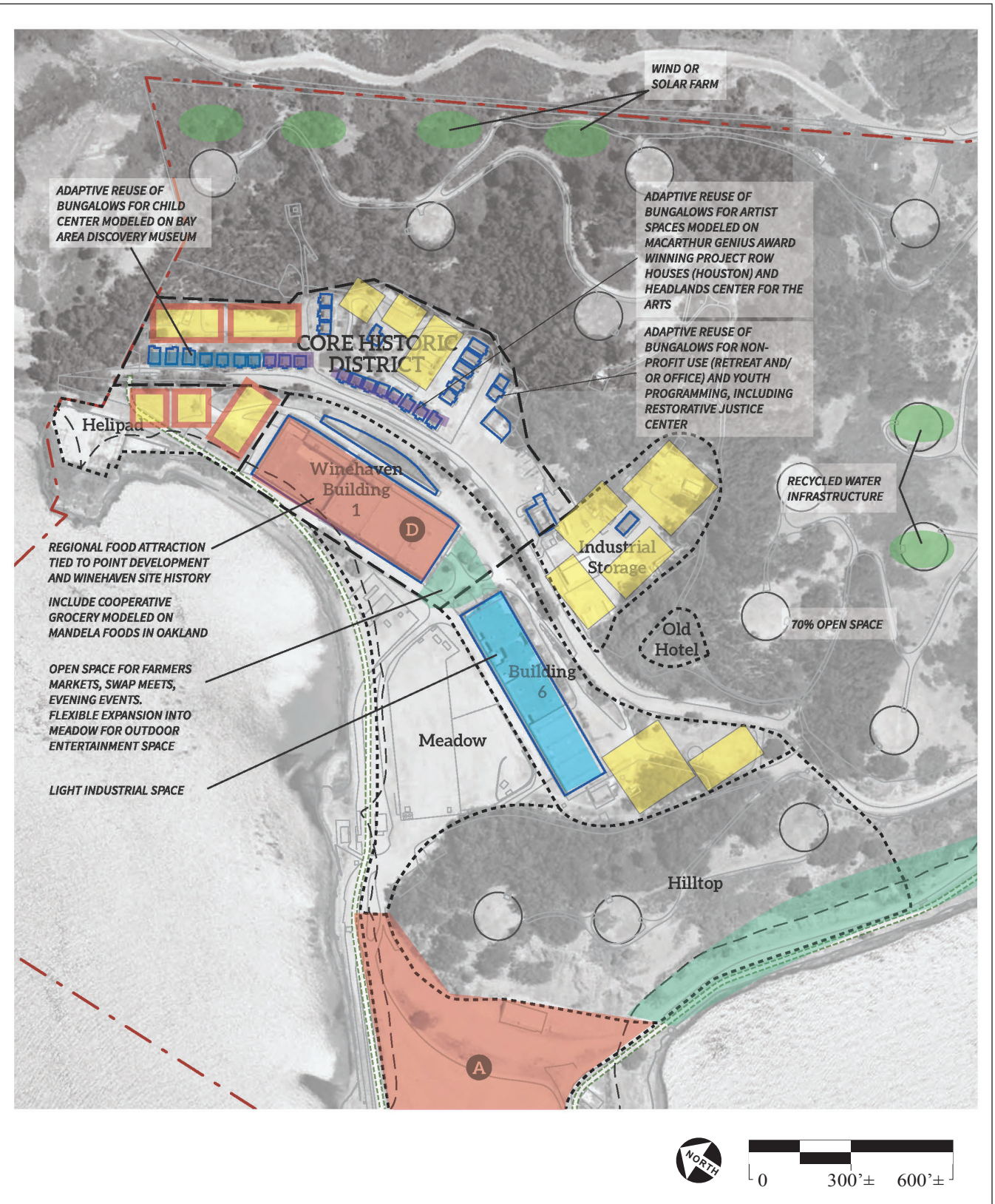
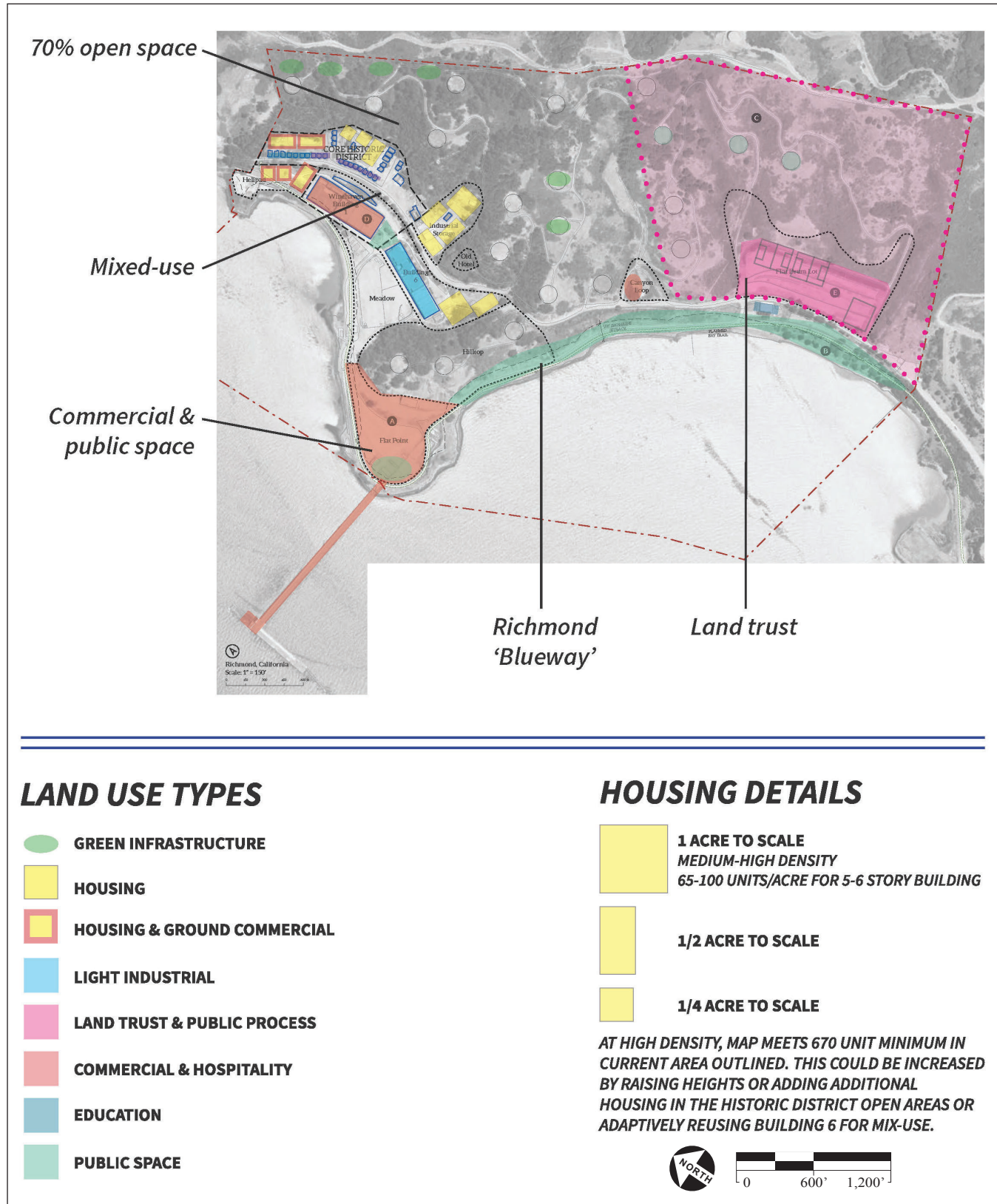


Figure 6-5a
Alternative E – Affordable Housing Reduced Density Alternative – Site Plan

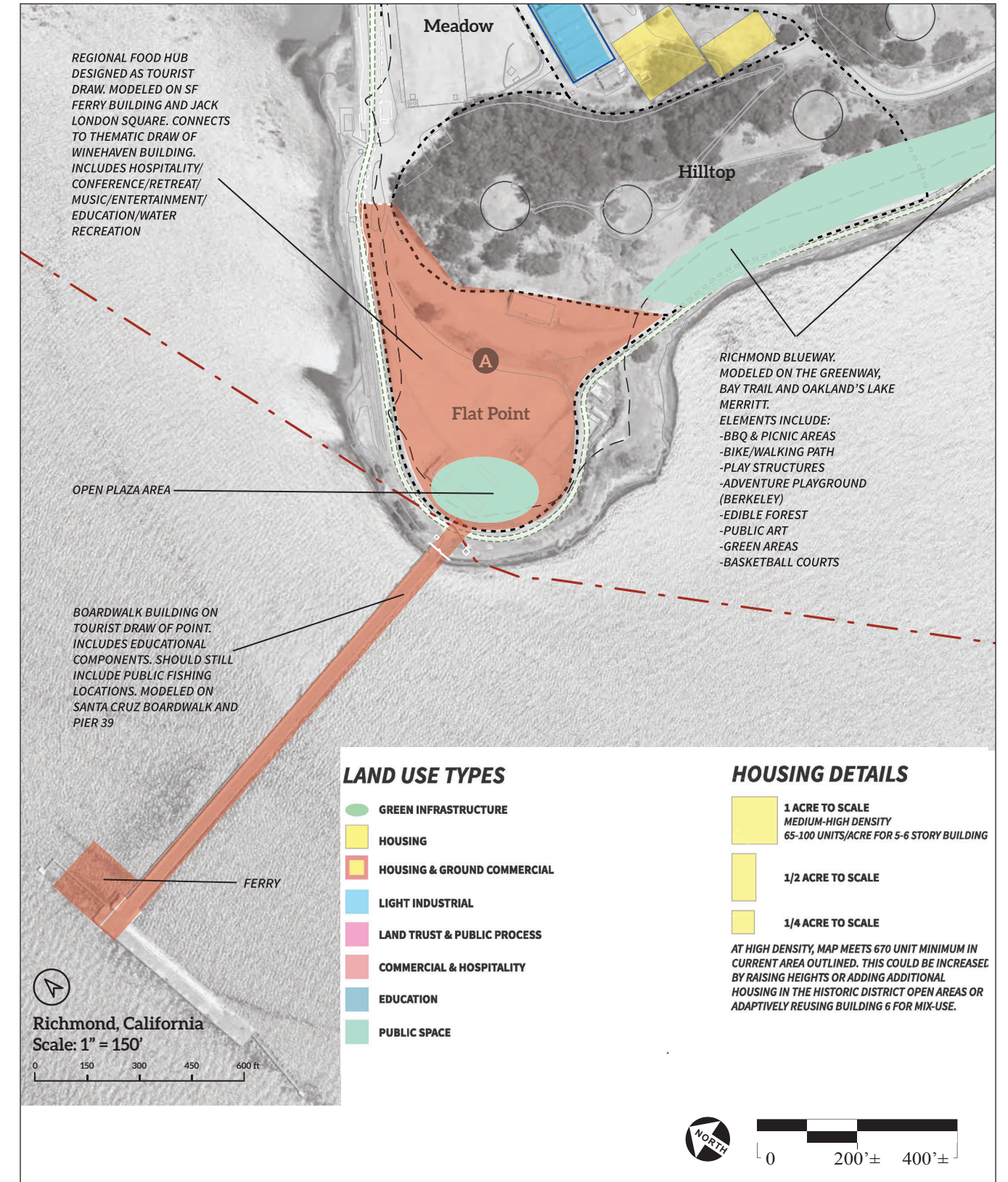
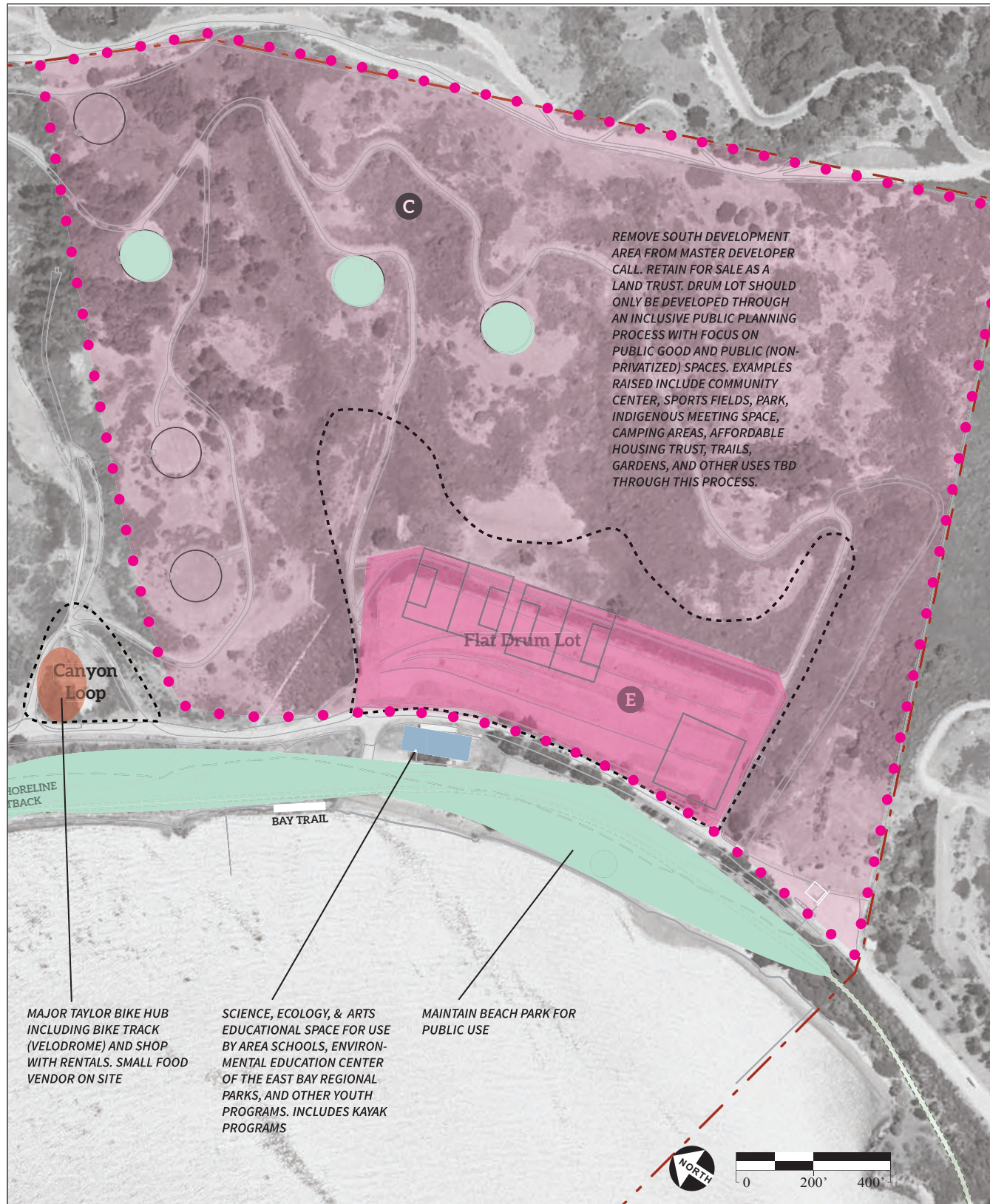


Figure 6-5b
Alternative E – Affordable Housing Reduced Density Alternative – Site Plan

wind or solar farms, in addition to preserving sensitive habitat and minimizing ridgeline disturbance (refer to **Figure 6-5a**). The Bay Trail would be extended by way of the Richmond 'Blueway' and would increase shoreline recreational opportunities in the form of walking/bike paths, picnic areas, play structures, and public art. Additionally, this alternative is consistent with the BRAC approval, as well as with the Navy ROD for the transfer.

Summary of Environmental Impacts

Similar to the Modified Project, the entirety of the Historic District would be utilized for residential, commercial, and light industrial purposes. However, Alternative E includes extensive development encompassing the peninsula, including approximately 450,000 sq. ft. of additional commercial development, which is approximately 200,000 sq. ft. more than what is proposed by the Modified Project. The new development would also include a boardwalk and ferry terminal, similar to that proposed under the Modified Project. While the rebuilding and further development of the boardwalk may result in a positive effect on the local economy, it could result in numerous adverse environmental impacts surrounding the Bay that may not occur to the same extent under the Modified Project. Such adverse environmental impacts include shoreline degradation, air and water pollution, soil erosion, an increase in noise level, and contamination of Bay waters. Additionally, wind, solar, and recycled water infrastructure would be developed within the open space area unlike under the Modified Project.

Aesthetics

As proposed in the Modified Project, Alternative E also includes the development of retail and commercial space, residential dwellings, reuse of the Historic District, as well as the development of a ferry terminal. Alternative E includes approximately half of the number of residential units and approximately 200,000 sq. ft. more commercial development than the Modified Project. The housing development under Alternative E is located in a more consolidated housing area, within the boundaries of the Historic District, as opposed to the housing areas proposed in the Modified Project that are spread throughout five different areas, approximately four of which are located outside of the Historic District boundary. As a result, although Alternative E would result in more square footage of commercial development, the Modified Project utilizes more of the Project Site, resulting in more potential effects on scenic vistas. As a result, Alternative E would result in a lesser overall impact regarding aesthetics when compared to the Modified Project.

Air Quality and Greenhouse Gas Emissions

Alternative E would result in generation of air and GHG emissions through the construction and operation of the project under this alternative. Alternative E would have a similar impact on air quality and GHG as the Modified Project. These impacts include the exposure of sensitive receptors to pollutant concentrations, increased odors as a result of emissions generated by Alternative E, and the generation of GHG emissions as a result of the construction and operations. The implementation of mitigation measures would in most cases reduce impacts to less-than-significant levels, however there are some impacts that are significant and unavoidable even after mitigation measures have been implemented. Alternative E involves a lower level of construction activity, and although a larger amount of commercial development is proposed, there would be fewer housing units, equating to less construction activity. However, like the Modified Project, GHG emissions would remain significant and unavoidable.

Biological Resources

Construction proposed under Alternative E would result in significant impacts on biological resources. Mitigation measures proposed for the Modified Project would be required to reduce biological resources impacts under this alternative. Alternative E involves a lower level of construction activity, and although a larger amount of commercial development is proposed, there are far fewer housing units which equates to less construction activity. Alternative E would result in a smaller amount of land disturbance than the Modified Project, resulting in a lower level of adverse effects on nearby flora and fauna. Therefore, Alternative E would have a lesser overall impact on biological resources in comparison to the Modified Project.

Cultural Resources and Tribal Cultural Resources

Alternative E would result in similar cultural resources impacts in comparison to the Modified Project. Both Alternative E and the Modified Project include rehabilitation of Historic District buildings and would utilize the same square footage.

Additionally, both the Modified Project and Alternative E could cause adverse impacts to potential archaeological resources, human remains, and tribal cultural resources that have either been uncovered or have not yet been found, but Alternative E would disturb more ground, increasing potential impacts to archaeological and tribal cultural resources. Overall, Alternative E would have a similar impact on cultural resources in comparison to the Modified Project.

Energy

Energy consumption as a result of the construction and operation of both Alternative E and the Modified Project would be potentially significant regarding wasteful, inefficient, or unnecessary consumption of energy resources. Alternative E would consume energy for construction (to power construction equipment and motor fuel) and operations (to power the project, including power for water conveyance and for vehicle fuel). Mitigation measures proposed for the Modified Project would be required to reduce energy resources impacts under this alternative. Alternative E includes more square footage of commercial development, but fewer residential units. It is anticipated that the Alternative E and the Modified Project would have a similar demand on energy resources, and neither would use energy in a wasteful or inefficient manner.

Geology, Soils, and Mineral Resources

Although Alternative E and the Modified Project have allocated 70 percent of the Project Site to be preserved as open space, Alternative E would have a smaller footprint and less ground disturbance. Consequently, less grading would be required for development and less risk of potentially impacting top soils would result. A smaller amount of disturbance due to grading and overall development would reduce the potential of inducing geological risks onsite, such as landslides and impacts to unknown paleontological resources. Despite the differences in development areas, Alternative E would have the same susceptibility to seismic and unstable soils as the Modified Project due to the geological characteristics of the Project Site. Overall, Alternative E would have less of an impact on geology and soils in comparison to the Modified Project. Additionally, due to the absence of mineral resources onsite, Alternative E would be similar to the Modified Project in that it would have no impact on mineral

resources. Overall, Alternative E would have a lesser impact on geology, soils, and mineral resources when compared to the Modified Project.

Hazards, Hazardous Materials, and Wildfire

Although Alternative E includes approximately 200,000 sq. ft. more of commercial development, the Modified Project proposes more residential units. As a result, the use, storage, and transport of hazardous materials would be less under Alternative E. Alternative E would therefore have less of an impact than the Modified Project.

Cortese List records identify contaminated locations onsite, and remediation of the Project Site would still be required prior to commercial or residential development onsite per SFBRWQCB Order No. R2-2011-0087. The potential of hazardous material exposure during remediation and the transport of contaminated materials would be similar to the Modified Project. Therefore, impacts would be the same.

The Project Site is located within a Very High Fire Hazard Severity Zone and has other natural conditions, such as wind and steep hillsides, which make it highly susceptible to wildfire risk. Both Alternative E and the Modified Project would include fire safety measures that lower the current risk of wildfire in the area, such as vegetation maintenance plans, new fire hydrants, and new water facilities that meet fire code requirements for water pressure, and would include wildfire emergency response plans. Alternative E would not include a new fire station, which could increase response times to the Project Site during a fire, but would also have fewer people to coordinate during an emergency. These impacts would be the same.

Overall, while similar, impacts to hazards, hazardous materials, and wildfire would be less under Alternative E when compared to the Modified Project.

Hydrology and Water Quality

Similar to the Modified Project, Alternative E also includes the creation of additional impervious surfaces as a result of new development and has the potential to adversely impact water quality due to the release of pollutants from construction and operation. Consequently, Alternative E would require mitigation measures similar to the Modified Project to reduce these impacts to less-than-significant levels. However, Alternative E involves less development than the Modified Project. Therefore, impacts would be less than the Modified Project because the reduced development would not affect drainage as significantly due to less pervious surfaces built and less potential pollution introduced during construction and operation.

Alternative E would have the same risk related to seiches, flooding, and tsunamis as the Modified Project because development size does not affect the potential of these events from occurring. However, the Bay does not experience seiches, the Project Site is not located within an area prone to flooding, and the Project Site is not located within a mapped tsunami inundation area. Therefore, Alternative E, similar to the Modified Project, has little risk from inundation due to seiches, floods, and tsunamis.

Overall, impacts to hydrology and water quality would be less under Alternative E in comparison to the Modified Project.

Land Use and Planning

Alternative E does not include new roadways or aboveground infrastructure through existing communities. No residential uses exist on the Project Site that is surrounded by industrial uses, water, and undeveloped land. There are no communities on the Project Site or in its vicinity. Therefore, similar to the Modified Project, Alternative E would not physically divide an established community, and no impact would occur.

Similar to the Modified Project, Alternative E would require rezoning. This alternative would involve amending the General Plan and rezoning to change the Project Site General Plan land use designation and zoning designations to be consistent with the development proposed. However, Alternative E would be consistent with other land use policies, such as the Reuse Plan and the Bay Plan. The Reuse Plan proposes the rehabilitation and adaptive reuse of the buildings that contribute to the Historic District and retention of 70 percent of the Project Site's open space, which is the same as proposed under Alternative E. Similar to the Modified Project, Alternative E would preserve the on-site historical buildings, retain approximately 193 acres of the Project Site as open space, and incorporate ideas from the proposed reuse potential described in the Reuse Plan in the development areas. While inconsistent with those elements of the Bay Plan that are beyond BCDC's jurisdictional boundaries, Similar to the Modified Project, Alternative E would not conflict with the Bay Plan and would be consistent with the Reuse Plan. In conclusion, Alternative E would have a similar impact related to land use and planning when compared to the Modified Project.

Noise

The sources of noise and ground-borne vibration generated as a result of the construction of Alternative E would be similar to that determined for the Modified Project, although the scale of noise and vibration generated would be less than the Modified Project due to the smaller developments proposed under the alternative. However, construction of the alternative would still generate an increase in ambient noise levels and ground-borne vibrations, and consequently create a potentially significant impact to nearby receptors. Furthermore, ground-borne vibration could damage the Historic District. Mitigation measures for the Modified Project would be implemented to reduce impacts related to noise to a less-than-significant level.

During operations, Alternative E would generate an increase in ambient noise (e.g., from HVAC systems), but less than the Modified Project due to its overall smaller development footprint and potentially a smaller increase in traffic volume. To reduce the potential impacts from increased ambient noise levels from on-site sources and traffic, Alternative E would implement mitigation measures similar to those specified for the Modified Project. In conclusion, Alternative E would have a lesser impact on noise in comparison to the Modified Project.

Population and Housing

There is currently no housing or people on the Project Site that could be displaced by Alternative E. Therefore, Alternative E, similar to the Modified Project, would not displace substantial numbers of people or housing that would necessitate the construction of replacement housing elsewhere. Thus, no impact would result.

Alternative E could lead to future population growth as a result of the increase in commercial development, retail stores, and restaurants that would be implemented without potentially also providing a sufficient number of residences to accommodate new workers. This is different than the Modified Project, which even under Option 2, would create enough housing to meet the demand of its new workers. The employment growth that would result from Alternative E would not be unplanned growth because the Reuse Plan, the General Plan, and zoning has extensively and consistently planned for development and growth at Point Molate and on the San Pablo Peninsula. Furthermore, while the commercial and retail developments could lead to an increase in population due to employees moving to the area to fill the employment vacancies created, and although the square footage of commercial development is greater than the Modified Project, it is anticipated that the new workers could be accommodated in areas in the City planned for housing and would not lead to substantial unplanned growth either in the City or outlying areas. In conclusion, Alternative E would have a similar impact on population and housing when compared to the Modified Project.

Public Services and Recreation

The development of Alternative E would result in the increased need for public services. While Alternative E would generate less service calls for fire and police protection services compared to the Modified Project as a result of a smaller population increase, this alternative would not include the construction of an on-site joint police and fire station to serve the Project Site. Therefore, all service calls would be answered by off-site personnel and no additional sworn officers or fire personnel would be hired to accommodate the increase in calls. This could result in longer response times for fire protection services, and a lower sworn officer to population ratio. This would be a potentially significant impact without mitigation.

The development of Alternative E would result in the increase of school-aged children in the City, however it would be less than the Modified Project because the Modified Project would build 1,260 or 2,040 housing units, depending on the option chosen, while Alternative E would build approximately 670 new housing units. While the number of students generated would be less under Alternative E than the Modified Project, some of these schools are operating above their master planning capacity. Therefore, this could be a potentially significant impact if more children are introduced. However, similar to the Modified Project, the alternative would be subject to the West Contra Costa Unified School District (WCCUSD) commercial and residential fee in place at the time of application for a building permit. This would constitute full mitigation for impacts to school facilities caused by the increase in school enrollment in the WCCUSD due to this alternative.

Furthermore, Alternative E would be consistent with applicable recreation policies from the Bay Plan because similar recreational facilities would be provided in the alternative as the Modified Project. Overall, although similar, impacts to public services and recreation would be less under Alternative E in comparison to the Modified Project.

Transportation

Traffic generated as a result of the construction of Alternative E would be similar to that determined for the Modified Project, although the scale of traffic generated would be less than the Modified Project due

to the smaller number of housing units proposed under this alternative. Construction of the alternative could still generate an increase in traffic. The Modified Project proposes extensive construction, including the widening of Stenmark Drive to adequately accommodate the influx of people and cars. Similar to the Modified Project, Alternative E includes a new ferry terminal, but, unlike the Modified Project, Alternative E also includes a boardwalk intended to draw in tourists. While the number of visitors to Alternative E would be more than to the Modified Project, as a result of fewer residences, Alternative E would result in a lesser impact regarding transportation when compared to the Modified Project.

Utilities and Service Systems

Similar to the Modified Project, Alternative E would require substantial infrastructure upgrades to meet the demand of new commercial and residential uses, including a new wastewater connection and upgraded water infrastructure. But because Alternative E's development occurs in a more compact footprint, overall ground disturbance to construct the infrastructure would be less. Overall Alternative E would have a lesser impact on utilities than the Modified Project.

6.5 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA Guidelines § 15126.6(d) requires an evaluation of alternatives to the Modified Project.

“The EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the modified project. A matrix displaying the major characteristics and significant environmental effects of each alternative may be used to summarize the comparison. If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed.”

Consistent with the above CEQA requirement, a summary matrix has been prepared which compares the effectiveness of each of the alternatives in reducing environmental impacts. This matrix, presented in **Table 6-2**, identifies whether the alternatives would have greater, lesser, or similar impacts for each impact area when compared with the Modified Project. As stated above in **Section 6.2.2**, some significant and unavoidable impacts would occur as a result of the Modified Project. Most of the impacts identified under the Modified Project would be less than significant after mitigation. Therefore “greater” and “lesser” impacts identified in **Table 6-2** are generally referring to varying degrees of impacts below established significance thresholds. In summary, the environmentally superior alternative is the alternative that would cause the least impact to the biological and physical environment.

As discussed above, implementation of the No Action Alternative (Alternative A) would result in fewer short term environmental impacts than would occur under the Modified Project and other pro-development alternatives. Specifically, temporary construction impacts would be avoided, including increased noise, traffic, and air quality emissions. However, Alternative A does not include additional remediation of the Project Site or the rehabilitation of the Historic District, and would therefore adversely affect soil and water quality as well as become a detriment to historical and cultural resources.

Alternative A would not achieve any of the Modified Project objectives. For these reasons, Alternative A would not be considered the environmentally superior alternative.

When comparing all of the proposed Alternatives, the Alternative D-Community Plan Alternative would be the environmentally superior alternative (refer to **Table 6-2**). Alternative D would generate substantially fewer vehicle trips associated with construction, which would reduce significant impacts associated with traffic and circulation, noise, and mobile emissions including GHGs, and would result in a less significant odor impact. Additionally, impacts to soil erosion, shoreline degradation, and aesthetics would be minimal.

Alternative D includes the least area of development, other than Alternative A and would include more open space. Alternative D would meet the housing production envisioned by the Reuse Plan, rehabilitate historic buildings, and participate in applicable cleanup and routine maintenance of parkland. Alternative D would result in the majority of the Project Site remaining as open space or otherwise undeveloped. While the construction under Alternative D would increase noise levels, traffic volume, and GHG emissions, the amount of construction would be much less than under the Modified Project, greatly reducing impacts and energy use during construction. In conclusion, Alternative D would have the lowest level of impacts, and, as a result, would be considered the environmentally superior alternative.

TABLE 6-2
ENVIRONMENTAL IMPACT COMPARISON BETWEEN THE MODIFIED PROJECT AND ALTERNATIVES

Issue Area	Proposed Modified Project	Project Alternatives				
		Alternative A No Action	Alternative B Reduced Intensity Mixed-Use Development (Formerly Alternative D)	Alternative C Base Reuse Plan Alternative	Alternative D Community Plan Alternative	Alternative E Affordable Housing Reduced Intensity Alternative
Aesthetics	LTS with MM	Greater	Greater	Lesser	Lesser	Lesser
Air Quality and Greenhouse Gas Emissions	SU (GHG)	Lesser	Lesser	Lesser	Lesser	Lesser
Biological Resources	LTS with MM	Lesser	Similar	Lesser	Lesser	Lesser
Cultural Resources and Tribal Cultural Resources	LTS with MM	Greater (Historic) and Lesser (Archeological and Tribal Cultural)	Greater (Historic) and Lesser (Archeological and Tribal Cultural)	Greater	Similar	Similar
Energy	LTS with MM	Lesser	Lesser	Lesser	Lesser	Similar
Geology, Soils, and Minerals	LTS with MM	Lesser	Greater	Lesser	Lesser	Lesser
Hazards, Hazardous Materials, and Wildfire	LTS with MM	Lesser (Hazards and Hazardous Materials) and Similar (Wildfire)	Similar	Lesser	Lesser (Hazards and Hazardous Materials) and Similar (Wildfire)	Lesser
Hydrology and Water Quality	LTS with MM	Lesser	Lesser	Lesser	Lesser	Lesser
Land Use and Planning	LTS	Greater	Similar	Similar	Similar	Similar
Noise	LTS with MM	Lesser	Lesser	Lesser	Lesser	Lesser
Population and Housing	LTS	Similar	Similar	Similar	Similar	Similar
Public Services and Recreation	LTS with MM	Lesser	Similar	Lesser	Lesser	Lesser
Transportation	SU	Lesser	Lesser	Lesser	Lesser	Lesser
Utilities and Service Systems	LTS with MM	Lesser	Similar	Lesser	Lesser	Lesser
Note: LTS = Less than Significant MM = Mitigation Measure SU = Significant and Unavoidable						

SECTION 7.0

REPORT PREPARATION

7.0 REPORT PREPARATION

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Cultural Resources Consultants

JRP Historical Consulting, LLC

Eelgrass Consultants

Applied Marine Sciences, Inc.

Geotechnical Consultants

ENGEO Incorporated

Hazardous Materials Consultants

Terraphase Engineering, Inc.

Noise Consultants

Bollard Acoustical Consultants, Inc.

Traffic Consultants

Abrams Associates Traffic Engineering, Inc.

Utilities Consultants

BKF Engineers

Giacalone Design Services, Inc.

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SECTION 8.0

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SECTION 9.0

ACRONYMS

9.0 ACRONYMS

Numerals/Special Characters

2008 WSA	Letter Dated September 10, 2008 concerning the Point Molate Mixed-Use Tribal Destination Resort and Casino Project
2009 DEIS/EIR	<i>Draft Environmental Impact Statement/Environmental Impact Report</i>
2011 FEIR	<i>Final Environmental Impact Report for the Point Molate Mixed-Use Tribal Destination Resort and Casino Project</i>
µg/dL	micrograms per deciliter
µg/m ³	micrograms per cubic meter
°F	degrees Fahrenheit

A

AADT	annual average daily traffic
AB	Assembly Bill
ABAG	Association of Bay Area Governments
ACM	asbestos-containing material
AD	Anno Domini
ADA	Americans with Disabilities Act
ADT	average daily traffic
AES	Analytical Environmental Services
AMR	American Medical Response
amsl	above mean sea level
APN	Assessor's Parcel Number
Applicant	Winehaven Legacy LLC
ASCE	American Society of Civil Engineers
AST	Aboveground Storage Tank
ASTM	American Society of Testing and Materials
AT&T	American Telephone and Telegraph

B

B.P.	Before Present
BAAQMD	Bay Area Air Quality Management District
BART	Bay Area Rapid Transit
Bay	San Francisco Bay
Bay Area	San Francisco Bay Area
Bay Plan	San Francisco Bay Plan
Bay Trail	San Francisco Bay Trail
BCDC	Bay Conservation and Development Commission
BenMAP	Benefits Mapping and Analysis Program
BFE	Base Flood Elevation
bgs	below ground surface
BIA	Bureau of Indian Affairs
BMP	best management practice

BPA	Bay Plan Amendment
BRAC	Base Realignment and Closure
BTU	British Thermal Units

C

CAL FIRE	California Department of Forestry and Fire Protection
Cal/EPA	California Environmental Protection Agency
Cal/OSHA	California Occupational Safety and Health Administration
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAER	Community Awareness and Emergency Response
CAFÉ	Corporate Average Fuel Economy
CalARP	California Accidental Release Prevention
CalEEMod	California Emissions Estimator Model, Version 16.3.2
CALGreen	California Green Building Code Standard
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CAP	criteria air pollutant
CARB	California Air Resources Board
CAT	Climate Action Team
CAWA	California Wine Association
CBC	California Building Code
CBSC	California Building Standards Code
CC	Coastal Commercial
CCAA	California Clean Air Act
CCCEHSD	Contra Costa County Environmental Health Services Department
CCHS	Contra Costa Health Services
CCR	California Code of Regulations
CCTA	Contra Costa Transportation Authority
CDC	Centers for Disease Control and Prevention
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CG	General Commercial
CGS	California Geological Survey
CH ₄	methane
CHBC	California Historical Building Code
City	City of Richmond
CIWMB	California Integrated Waste Management Board
CMA	Congestion Management Agency
CMP	Congestion Management Plan
CNEL	Community Noise Exposure Level

CNPS	California Native Plant Society
CO	carbon monoxide
CO ₂ e	carbon dioxide equivalent
COC	Contaminant of Concern
Commission	California Coastal Commission
County	Contra Costa County
CREC	Controlled Recognized Environmental Condition
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
CRUP	Covenant to Restrict the Use of Property
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
CWS	Community Warning System
CY	cubic yard
CZMA	Coastal Zone Management Act
D	
db	decibel
dbA	A-weighted decibel
DBP	disinfection by-products
DBRAC	Defense Base Realignment and Closure Act
DDT	dichloro-diphenyl-trichloroethane
DERP	Defense Environmental Restoration Program
DOC	California Department of Conservation
DoD	U.S. Department of Defense
DOT	U.S. Department of Transportation
DPM	diesel particulate matter
DPS	Distinct Population Segment
DTSC	California Department of Toxic Substances Control
DVECC	Disease Vector and Ecology Control Center
E	
EB	eastbound
EBMUD	East Bay Municipal Utilities District
EBRPD	East Bay Regional Park District
EBS	Environmental Baseline Survey
ECP	Erosion Control Plan
EDC	endocrine disrupting chemical
EFH	Essential Fish Habitat
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EMS	emergency medical services
EO	Executive Order
ERP	emergency response plan
ESA	Endangered Species Act

ESL	Environmental Screening Level
ESU	Evolutionarily Significant Unit
ESCP	Erosion and Sediment Control Plan
ETCA	Early Transfer Cooperative Agreement
EV	electric vehicle

F

FEIR	Final Environmental Impact Report
FEMA	Federal Emergency Management Agency
FHSA	Federal Hazardous Substances Act
FHWA	Federal Highway Administration
FICON	Federal Interagency Committee on Noise
FIFRA	Federal Insecticide, Fungicide and Rodenticide Act
FIRM	Flood Insurance Rate Map
FOSET	Finding of Suitability for Early Transfer
FR	Federal Register
Friant Ranch	<i>Sierra Club v. County of Fresno</i> (2018) 6 Cal.5th 502
FS	Feasibility Study
ft.	feet

G

GDP	gross domestic product
General Plan	City of Richmond General Plan 2030
gpd	gallons per day
gpm	gallons per minute
GHG	greenhouse gas
GSP	Groundwater Sustainability Plan
Guidiville	Guidiville Rancheria
GWP	global warming potential

H

HAP	Hazardous Air Pollutant
HAZWOPER	Hazardous Waste Operations and Emergency Response
HCM	Highway Capacity Manual, 6 th Edition
HCS	Hazard Communication Standard
HEPA	high-efficiency particulate air
HFC	hydrofluorocarbon
HHRA	Human Health Risk Assessment
HI	hazard index
Historic District	Winehaven Historic District
HOA	Homeowner's Association
HOP	hydrocarbon oxidation product
HPA	hydrologic planning area
HPC	Historic Preservation Commission
HREC	Historical Recognized Environmental Condition

HSC	California Health and Safety Code
HVAC	heating, ventilating, and air conditioning
I	
I-580	Interstate 580
I-80	Interstate 80
IG	General Industrial
IIPP	Injury and Illness Prevention Program
IL	Industrial, Light
IPCC	Intergovernmental Panel on Climate Change
IR	Installation Restoration
IRM	Interim Remedial Measure
IRP	Installation Restoration Program
IS	Initial Study
IS/MND	Initial Study/Mitigated Negative Declaration
ITE	Institute of Transportation Engineers
J	
JRP	JRP Historical Consulting Services
K	
kV	kilovolt
kVA	kilo-volt amperes
L	
lb/day	pounds per day
lb/yr	pounds per year
LBP	lead-based paint
Ldn	day-night average level
Leq	average, or equivalent, sound level
LID	low-impact development
LOS	Level of Service
LRA	Local Responsibility Area
LSAA	Lake and Streambed Alteration Agreement
LUPA	Land Use Plan Amendment
LUST	leaking underground storage tank
M	
MBTA	Migratory Bird Treaty Act
MCE	Marin Clean Energy
MCL	Maximum Contaminant Level
MeG	Millsholm Loam
MEIR	Maximally Exposed Individual Resident
mgd	million gallons per day
MI-MU	Medium Intensity Mixed-Use
MLD	Most Likely Descendants

MMT	million metric tons
MND	Mitigated Negative Declaration
MOA	Memorandum of Agreement
Modified Project	Point Molate Mixed-Use Development Project
mpg	miles per gallon
MRP	Municipal Regional Permit
MRZ	Mineral Resource Zone
MS4	separate storm sewer system
MT	metric ton
MTC	Metropolitan Transportation Commission
MTSO	Multi-Modal Transportation Objective
MVA	megavolt amperes
MW	megawatts
N	
N ₂ O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAC	Noise Abatement Criteria
NAGPRA	Native American Graves Protection and Repatriation Act
NAHC	Native American Heritage Commission
Navy	U.S. Navy
NB	northbound
NECPA	National Energy Conservation Policy Act
NEHRP	National Earthquake Hazards Reduction Program
NEPA	National Environmental Protection Act
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NFA	no further action
NFD	Naval Fuel Depot
NFIP	National Flood Insurance Program
NFPA	National Fire Protection Association
NH ₃	ammonia
NHPA	National Historic Preservation Act
NHTSA	National Highway Traffic Safety Administration
NMFS	National Marine Fisheries Service
NPDES	National Pollutant Discharge Elimination System
NO ₂	nitrogen dioxide
NOI	Notice of Intent
NOP	Notice of Preparation
NOx	nitrogen oxides
NPL	National Priority List
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NSDWR	National Secondary Drinking Water Regulations
NWIC	Northwest Information Center

O

O ₃	ozone
O&M	operations and maintenance
OEHHA	Office of Environmental Health Hazard Assessment
OHP	Office of Historic Preservation
OPR	Office of Planning and Research
OS	Open Space
OSHA	Occupational Safety and Health Administration

P

PA	Planned Area
PA	Programmatic Agreement
Pb	lead
PCB	polychlorinated biphenyl
PCMMP	Post Closure Maintenance and Monitoring Plan
PCN	Pre-Construction Notification
PFC	perfluorocarbon
PG&E	Pacific Gas and Electric
PGWTP	packaged groundwater treatment plant
Phase I	Phase I Environmental Site Assessment
PMA	Point Molate Alliance
PM ₁₀	particulate matter 10 microns in size
PM _{2.5}	particulate matter 2.5 microns in size
ppm	part per million
ppv	peak particle velocity
PR	Parks and Recreation
PRC	Public Resources Code
Project Site	Point Molate Site

Q**R**

RACM	regulated asbestos-containing material
Ramboll	Ramboll US Corporation
RARE	Richmond Advanced Recycle Expansion
RCRA	Resource Conservation and Recovery Act
REC	Recognized Environmental Condition
Reuse Plan	<i>1997 Point Molate Reuse Plan</i>
RH	Single-Family Hillside Residential
RHA	Rivers and Harbors Act of 1899
RHNA	Regional Housing Needs Allocation
RHNP	Regional Housing Needs Plan
RI	Remedial Investigation
RM1	Multi-Family Residential
RMC	Richmond Municipal Code

RMP	Risk Management Plan
RMS	root-mean-square
RMSD	Richmond Municipal Sewer District
ROD	Record of Decision
ROG	reactive organic gas
ROW	right-of-way
RPS	Renewables Portfolio Standard
RRS	Routes of Regional Significance
RTP	regional transportation plan
RWD	report of waste discharge
RWQCB	Regional Water Quality Control Board

S

S ₂ H	sulfide hydrogen
SARA	Superfund Amendments and Reauthorization Act
SB	Senate Bill
SCH#	State Clearinghouse Number
SCS	Sustainable Communities Strategy
Secretary	Secretary of the Interior
SEIR	Subsequent Environmental Impact Report
SF ₆	sulfur hexafluoride
SFBAWETA	San Francisco Bay Area Water Emergency Transportation Authority
SFBRWQCB	San Francisco Bay Regional Water Quality Control Board
SFBAAB	San Francisco Bay Area Air Basin
SGMA	Sustainable Groundwater Management Act
SGWMP	Soil and Groundwater Management Plan Disposal
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SLC	State Lands Commission
SMARA	California Surface Mining and Reclamation Act
SMARTS	Stormwater Multiple Application Tracking and Reporting System
SO ₂	sulfur dioxide
sq. ft.	square feet
STMP	Subregional Transportation Mitigation Program
SVP	Society of Vertebrate Paleontology
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board

T

T-BACT	Best Available Control Technology for Toxics
TAC	toxic air contaminant
TAZ	transportation analysis zone
TCE	trichloroethene
TCR	Tribal Cultural Resource
TDM	Transportation Demand Management

Terraphase	Terraphase Engineering Inc.
TIA	Transportation Impact Analysis
TMA	Transportation Management Association
TMDL	total maximum daily load
TPA	transportation priority area
TPH	total petroleum hydrocarbon
Tribe	Guidiville
TSCA	Toxic Substances Control Act

U

Ub	Urban Land
UC	University of California
UCMP	University of California Museum of Paleontology
UPRR	Union Pacific Railroad
US 101	U.S. Highway 101
USACE	U.S. Army Corps of Engineers
USC	U.S. Code
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish & Wildlife Service
USGS	U.S. Geological Survey
UST	Underground Storage Tank
UV	ultraviolet
UWMP	Urban Water Management Plan

V

VMT	vehicle miles traveled
VOC	Volatile Organic Compounds

W

WB	westbound
WCCIWMA	West Contra Costa Integrated Waste Management Authority
WCCTAC	West Contra Costa Transportation Advisory Committee
WCCUSD	West Contra Costa Unified School District
WCWD	West County Wastewater District
WDR	waste discharge requirements
WERP	wildfire emergency response plan
West County Action Plan	West Contra Costa Action Plan
WPCP	water pollution control plant
WSA	Water Supply Assessment
WSMP	Water Supply Management Program 2040
WWTP	wastewater treatment plant

X, Y, Z

ZEV	zero emissions vehicle
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