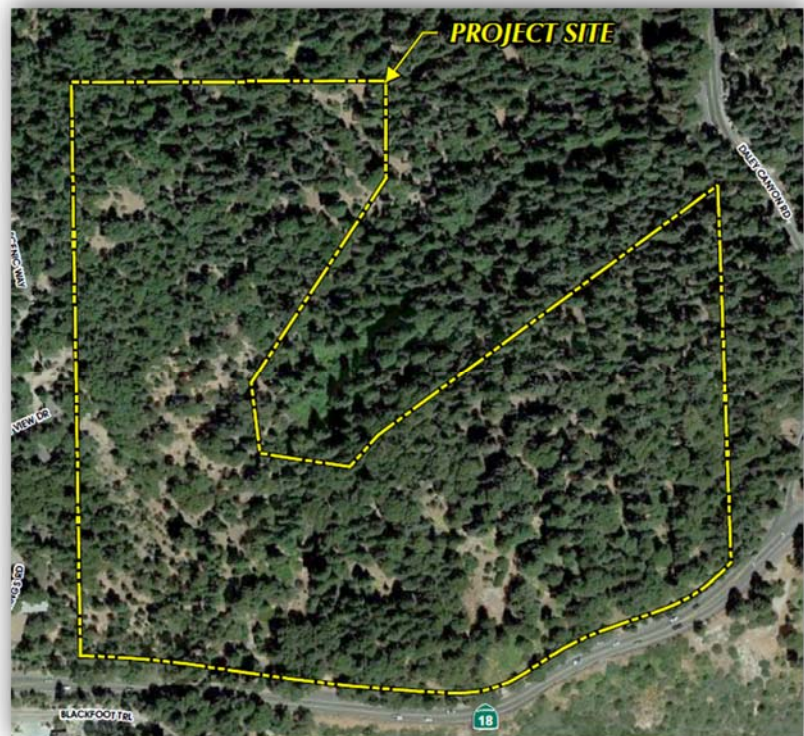


Church of The Woods Project

Rim Forest, California



Lead Agency

County of San Bernardino
385 N. Arrowhead Avenue
San Bernardino, CA 92415

January 3, 2019

Draft Revised Environmental Impact Report
SCH No. 2004031114

**Church of The Woods
Project**
Rim Forest, California

Lead Agency

County of San Bernardino
385 N. Arrowhead Avenue
San Bernardino, CA 92415

CEQA Consultant

T&B Planning, Inc.
17542 East 17th Street, Suite 100
Tustin, CA 92780

Project Applicant

Church of the Woods
1410 Calgary Drive
Lake Arrowhead, CA 92352

Lead Agency Discretionary Permits

Conditional Use Permit No. P201700270

January 3, 2019



TABLE OF CONTENTS

<u>Section Name and Number</u>	<u>Page</u>
0.0 Executive Summary	0-1
0.1 Background Summary.....	0-1
0.2 Project Summary	0-1
0.3 Areas of Controversy and Issues to be Resolved	0-2
0.4 Classification of Environmental Impacts	0-2
0.5 Alternatives	0-3
0.6 Summary of impacts and mitigation measures	0-4
1.0 Introduction	1-1
1.1 Purpose and Overview of the EIR Process.....	1-1
1.2 Administrative Background	1-1
1.3 Need for the DREIR.....	1-2
1.4 Scope of the DREIR.....	1-3
1.5 Document Format.....	1-3
1.6 Revised CEQA Guidelines.....	1-7
1.7 Cumulative Scenario	1-8
1.8 Availability of the DREIR.....	1-12
2.0 Project Description.....	2-1
2.1 Environmental Setting.....	2-1
2.1.1 Regional Setting and Location.....	2-2
2.1.2 Local Setting and Location.....	2-2
2.1.3 Surrounding Land Uses and Development	2-6
2.1.4 Existing Physical Site Conditions.....	2-6
2.1.5 Planning Context	2-6
2.1.6 Land Use.....	2-10
2.1.7 Aesthetics and Topographic Features	2-10
2.1.8 Air Quality	2-10
2.1.9 Geologic Setting.....	2-10
2.1.10 Hydrologic Setting	2-13
2.1.11 Noise Setting	2-14
2.1.12 Transportation and Traffic Setting	2-14
2.1.13 Utilities and Services Systems	2-14
2.1.14 Vegetation.....	2-15
2.1.15 Wildlife.....	2-15
2.2 Overall Project Characteristics.....	2-15
2.3 Statement of Objectives	2-16



TABLE OF CONTENTS

<u>Section Name and Number</u>	<u>Page</u>
2.4 Project Components and Discretionary Approvals	2-16
2.4.1 Conditional Use Permit (CUP P201700270)	2-17
2.5 Project Construction and Operational Characteristics	2-22
2.5.1 Construction Details	2-22
2.5.2 Equipment Staging	2-27
2.5.3 Operational Characteristics	2-27
2.6 Summary of Requested Actions	2-29
2.7 Related Environmental Review and Consultation Requirements	2-29
3.0 Environmental Analysis	3-1
3.1 Summary of DREIR Scope	3-1
3.1.1 Scope of Cumulative Effects Analysis	3-1
3.A Aesthetics	3.A-1
3.A.1 Environmental Setting	3.A-1
3.A.2 Regulatory Framework	3.A-3
3.A.3 Thresholds of Significance	3.A-6
3.A.4 Impact Analysis	3.A-7
3.A.5 Cumulative Impacts	3.A-17
3.A.6 Significance of Impacts Before Mitigation	3.A-18
3.A.7 Mitigation	3.A-18
3.B Air Quality	3.B-1
3.B.1 Environmental Setting	3.B-1
3.B.2 Regulatory Framework	3.B-11
3.B.3 Methodology for Calculating Air Quality Emissions	3.B-13
3.B.4 Thresholds of Significance	3.B-14
3.B.5 Impact Analysis	3.B-16
3.B.6 Cumulative Impacts	3.B-21
3.B.7 Significance of Impacts Before Mitigation	3.B-22
3.B.8 Mitigation Measures	3.B-23
3.C Biological Resources	3.C-1
3.C.1 Environmental Setting	3.C-1
3.C.2 Regional Connectivity/Wildlife Movement	3.C-5
3.C.3 Jurisdictional “Waters of the U.S./State”	3.C-7
3.C.4 Special-Status Species	3.C-7
3.C.5 Regulatory Framework	3.C-12
3.C.6 Thresholds of Significance	3.C-17



TABLE OF CONTENTS

<u>Section Name and Number</u>	<u>Page</u>
3.C.7 <i>Environmental Impacts</i>	3.C-18
3.C.8 <i>Impact Analysis</i>	3.C-20
3.C.9 <i>Cumulative Impacts</i>	3.C-24
3.C.10 <i>Significance of Impacts Before Mitigation</i>	3.C-25
3.C.11 <i>Mitigation Measures</i>	3.C-25
3.C.12 <i>Level of Significance After Mitigation</i>	3.C-27
3.D <i>Geology and Soils</i>	3.D-1
3.D.1 <i>Environmental Setting</i>	3.D-1
3.D.2 <i>Regulatory Framework</i>	3.D-5
3.D.3 <i>Thresholds of Significance</i>	3.D-8
3.D.4 <i>Environmental Impacts</i>	3.D-9
3.D.5 <i>Impact Analysis</i>	3.D-10
3.D.6 <i>Cumulative Impacts</i>	3.D-16
3.D.7 <i>Significance of Impacts Before Mitigation</i>	3.D-17
3.D.8 <i>Mitigation Measures</i>	3.D-18
3.D.9 <i>Level of Significance After Mitigation</i>	3.D-19
3.E <i>Hazards</i>	3.E-1
3.E.1 <i>Environmental Setting</i>	3.E-1
3.E.2 <i>Regulatory Framework</i>	3.E-3
3.E.3 <i>Thresholds of Significance</i>	3.E-4
3.E.4 <i>Environmental Impacts</i>	3.E-4
3.E.5 <i>Project Features</i>	3.E-5
3.E.6 <i>Impact Analysis</i>	3.E-6
3.E.7 <i>Cumulative Impacts</i>	3.E-8
3.E.8 <i>Significance Before Mitigation</i>	3.E-9
3.E.9 <i>Mitigation Measures</i>	3.E-9
3.E.10 <i>Level of Significance After Mitigation</i>	3.E-9
3.F <i>Hydrology and Water Quality</i>	3.F-1
3.F.1 <i>Environmental Setting</i>	3.F-1
3.F.2 <i>Regulatory Framework</i>	3.F-9
3.F.3 <i>Thresholds of Significance</i>	3.F-20
3.F.4 <i>Environmental Impacts</i>	3.F-20
3.F.5 <i>Project Features</i>	3.F-21
3.F.6 <i>Impact Analysis</i>	3.F-22
3.F.7 <i>Cumulative Impacts</i>	3.F-29
3.F.8 <i>Significance Before Mitigation</i>	3.F-29



TABLE OF CONTENTS

<u>Section Name and Number</u>	<u>Page</u>
3.F.9 Mitigation Measures.....	3.F-31
3.F.10 Level of Significance After Mitigation.....	3.F-32
3.G Land Use	3.G-1
3.G.1 Environmental Setting	3.G-1
3.G.2 Regulatory Framework.....	3.G-2
3.G.3 Thresholds of Significance.....	3.G-19
3.G.4 Environmental Impacts.....	3.G-20
3.G.5 Impact Analysis.....	3.G-20
3.G.6 Cumulative Impacts	3.G-55
3.G.7 Significance of Impacts Before Mitigation	3.G-55
3.G.8 Mitigation Measures.....	3.G-56
3.H Noise	3.H-1
3.H.1 Environmental Setting	3.H-1
3.H.2 Regulatory Framework.....	3.H-2
3.H.3 Existing Noise Conditions.....	3.H-6
3.H.4 Thresholds of Significance.....	3.H-12
3.H.5 Significant Impact Criteria	3.H-12
3.H.6 Environmental Impacts.....	3.H-13
3.H.7 Impact Analysis.....	3.H-17
3.H.8 Cumulative Impacts	3.H-20
3.H.9 Significance Before Mitigation	3.H-23
3.H.10 Mitigation Measures.....	3.H-23
3.H.11 Level of Significance After Mitigation.....	3.H-24
3.I Transportation and Circulation.....	3.I-1
3.I.1 Environmental Setting	3.I-1
3.I.2 Existing Traffic Conditions.....	3.I-4
3.I.3 Regulatory Framework.....	3.I-6
3.I.4 Thresholds of Significance.....	3.I-7
3.I.5 Impacts Analysis	3.I-8
3.I.6 Cumulative Impact Analysis	3.I-17
3.I.7 Significance of Impacts Before Mitigation	3.I-17
3.I.8 Mitigation	3.I-18
3.I.9 Significance of Impacts After Mitigation.....	3.I-19
3.J Greenhouse Gas Emissions	3.J-1
3.J.1 Environmental Setting	3.J-1



TABLE OF CONTENTS

<u>Section Name and Number</u>	<u>Page</u>
3.J.2 Methodology for Calculating Greenhouse Gas Emissions.....	3.J-15
3.J.3 Thresholds of Significance.....	3.J-16
3.J.4 Significance Impact Criteria.....	3.J-17
3.J.5 Impact Analysis.....	3.J-17
3.J.6 Cumulative Impacts	3.J-20
3.J.7 Significance of Impacts Before Mitigation	3.J-20
3.J.8 Mitigation Measures.....	3.J-20
4.0 Alternatives	4-1
4.1 Alternative 1: No Project/No Build Alternative.....	4-3
4.1.1 Description	4-3
4.1.2 Impact Analysis.....	4-3
4.1.3 Conclusion and Relationship of the Alternative to Project Objective	4-5
4.2 Alternative 2: No Project/Feasible Development Alternative.....	4-5
4.2.1 Description	4-5
4.2.2 Impact Analysis.....	4-6
4.2.3 Conclusion and Relationship of the Alternative to Project Objective	4-9
4.3 Alternative 3: Reduced Project/Alternative Site Design Alternative	4-9
4.3.1 Description	4-9
4.3.2 Impact Analysis.....	4-10
4.3.3 Conclusion and Relationship of the Alternative to Project Objective	4-13
4.4 Environmentally Superior Alternative	4-13
5.0 Other CEQA Considerations	5-1
5.1 Significant Unavoidable Impacts	5-1
5.1.1 Biological Resources	5-1
5.1.2 Noise	5-1
5.1.3 Transportation and Circulation.....	5-1
5.2 Reasons Why the Project is Being Proposed, Notwithstanding Significant Unavoidable Impacts	5-2
5.3 Significant Irreversible Environmental Changes	5-2
5.4 Growth-Inducing Impacts	5-3
5.5 Potential Secondary effects	5-3
5.5.1 Biological Resources (See Subsection 3.C of this DREIR).....	5-4
5.5.2 Geology and Soils (See Subsection 3.D of this DREIR)	5-4
5.5.3 Hydrology, Water Quality, and Water Supply (See Subsection 3.F of this DREIR)..	5-4
5.5.4 Noise (See Subsection 3.H of this DREIR)	5-4
5.5.5 Transportation and Circulation (See Subsection 3.I of this DREIR)	5-4
5.6 Conclusion.....	5-5



TABLE OF CONTENTS

<u>Section Name and Number</u>	<u>Page</u>
5.7 Effects Not Found to Be Significant	5-5
6.0 References	6-1
6.1 Documents Appended to this EIR.....	6-1
6.2 Documents and Websites Consulted	6-3
7.0 Organizations/Persons Consulted and List of Preparers.....	7-1
7.1 Agencies and Organizations.....	7-1
7.2 Report Preparation Personnel.....	7-1



EIR Technical Appendices (bound separately)

Appendix A	Notice of Preparation and Initial Study, Notice of Preparation Comments, Previous Staff Report, and Additional Comments
Appendix B	HDR. 2018. <i>Air Quality and Greenhouse Gas Analysis Church of the Woods</i> . April
Appendix C	Element Consulting. 2018. <i>Church of the Woods Project Habitat Assessment</i> . July
Appendix D1	LOR Geotechnical Group, Inc. 2017. <i>Geotechnical Update, Church of the Woods, Rimforest Area, San Bernardino County, California</i> . March
Appendix D2	W.J McKeever Inc. 2017. <i>Church of the Woods Earthwork Analysis Report</i> . June
Appendix E1	Timothy E. Paysen, PhD, Environmental Consultant. 2017. <i>Evacuation Plan Church of the Woods Site</i> . July
Appendix E2	Timothy E. Paysen, PhD, Environmental Consultant. 2017. <i>Fuel Modification Plan Church of the Woods Site</i> . July
Appendix F	W.J. McKeever Inc. 2018. <i>Preliminary Drainage Study and Additional Water Supply Information Church of the Woods</i> . April
Appendix G	HDR. <i>Noise and Vibration Impact Assessment Church of the Woods</i> . July
Appendix H	Translutions, Inc. 2018. <i>Church of the Woods Traffic Impact Analysis and Supplemental Correspondence</i> . September



LIST OF FIGURES

<u>Figure Number and Title</u>	<u>Page</u>
Figure 1-1	Related Projects Location Map 1-10
Figure 2-1	Regional Map 2-4
Figure 2-2	Vicinity Map 2-5
Figure 2-3	Surrounding Land Uses and Development 2-7
Figure 2-4	Existing General Plan Land Use/Zoning Designations..... 2-9
Figure 2-5	Aerial Photograph 2-11
Figure 2-6	USGS Topographic Map..... 2-12
Figure 2-7	Proposed Site Plan 2-18
Figure 2-8	Conceptual Landscape Plan 2-21
Figure 2-9	Proposed Physical Disturbances 2-23
Figure 2-10	Project Phasing Plan 2-26
Figure 3.A-1	Representative Site Photos 1-3 3.A-8
Figure 3.A-2	Existing vs. Simulated Project Site Views- Location 1 3.A-13
Figure 3.A-3	Existing vs. Simulated Project Site Views- Location 2 3.A-14
Figure 3.A-4	Existing vs. Simulated Project Site Views- Location 3 3.A-15
Figure 3.H-1	Sensitive Receptors and Noise Monitoring Locations 3.H-8
Figure 3.I-1	Project Trip Distribution 3.I-11



LIST OF TABLES

Table Number and Title	Page
Table 0.0-1	Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation 0-5
Table 1-1	Required DREIR Topics 1-4
Table 1-2	Cumulative Development Land Use Summary 1-11
Table 2-1	Site Plan Statistical Abstract 2-19
Table 2-2	Expected Project Construction Phase Durations 2-25
Table 2-3	Construction Equipment Assumptions 2-25
Table 2-4	Church of the Woods Operational Activities 2-28
Table 2-5	Matrix of Project Approvals/Permits 2-30
Table 3.0-1	Cumulative Projects List 3-4
Table 3.B-1	Ambient Air Quality Standards 3.B-5
Table 3.B-2	Attainment Status of Criteria Pollutants in the South Coast Air Basin 3.B-6
Table 3.B-3	SCAQMD Air Quality Thresholds of Significance 3.B-15
Table 3.B-4	SCAQMD Localized Significance Thresholds 3.B-15
Table 3.B-5	Maximum Daily Peak Construction Emissions Summary 3.B-18
Table 3.B-6	Summary of Operational Emissions 3.B-18
Table 3.B-7	Localized Significance Summary - Construction 3.B-19
Table 3.B-8	Localized Significance Summary - Operation 3.B-20
Table 3.F-1	Current and Projected Water Supplies (acre-feet per year) 3.F-5
Table 3.F-2	CLAWA's Projected Water Demand 3.F-6
Table 3.F-3	CLAWA's 2010 Water Demand Deliveries by Customer Category 3.F-7
Table 3.G-1	San Bernardino General Plan Consistency Analysis 3.G-22
Table 3.G-2	Relationship of Project to Relevant Lake Arrowhead Community Plan Policies 3.G-43
Table 3.G-3	Analysis of Consistency with SCAG 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy Goals 3.G-54
Table 3.H-1	Groundborne Vibration and Noise Impact Criteria 3.H-3
Table 3.H-2	San Bernardino County Noise Standards 3.H-5
Table 3.H-3	San Bernardino County Stationary Noise Standards 3.H-6
Table 3.H-4	Ambient Noise Monitoring Results 3.H-7
Table 3.H-5	24-Hour Ambient Noise Measurement Data 3.H-9
Table 3.H-6	Existing Vehicular Noise Contours 3.H-11
Table 3.H-7	Existing Stationary Noise Source Thresholds (dBA) 3.H-13
Table 3.H-8	Project Construction Noise Levels by Phase 3.H-15
Table 3.H-9	Vibration Source Amplitudes for Construction Equipment 3.H-16
Table 3.H-10	Estimated Noise Level Changes on Local Roadways Due to Project – Existing Year 3.H-19



LIST OF TABLES

<u>Table Number and Title</u>	<u>Page</u>
Table 3.H-11	Estimated Cumulative Noise Level Changes on Local Roadways Due to Project Future Year 2040 3.H-22
Table 3.I-1	Levels of Service Criteria 3.I-22
Table 3.I-2	Existing Intersection Levels of Service 3.I-23
Table 3.I-3	Project Trip Generation..... 3.I-24
Table 3.I-4	Opening Year (2018) Intersection Levels of Service..... 3.I-25
Table 3.I-5	Cumulative (2018) Intersection Levels of Service 3.I-26
Table 3.I-6	Year 2040 Intersection Levels of Service 3.I-27
Table 3.I-7	Existing Plus Project with Improvements Intersection Levels of Service 3.I-28
Table 3.I-8	Opening Year (2018) With Project with Improvements Intersection Levels of Service..... 3.I-29
Table 3.I-9	Cumulative (2018) With Project with Improvements Intersection Levels of Service..... 3.I-30
Table 3.I-10	Year 2040 With Project with Improvements Intersection Levels of Service..... 3.I-31
Table 3.J-1	Global Warming Potential for GHGs..... 3.J-2
Table 3.J-2	CARB Scoping Plan GHG Reduction Measures Towards 2020 Target..... 3.J-11
Table 3.J-3	GHG Emissions from Project-Related Construction 3.J-17
Table 3.J-4	Project's Annual GHG Emissions..... 3.J-18
Table 4-1	Comparison of Alternatives and Proposed Project 4-15



ACRONYMS, ABBREVIATIONS, AND UNITS OF MEASURE

<u>Acronym</u>	<u>Definition</u>
§	Section
>	greater than
≥	greater than or equal to
AADT	Average Annual Daily Traffic
AAQS	Ambient Air Quality Standards
AB	Assembly Bill
ADA	Americans with Disabilities Act
ADT	Average Daily Trips
AIA	Airport Influence Area
ALUC	Airport Land Use Commission
ALUCP	Airport Land Use Compatibility Plan
AMSL	Above Mean Sea Level
APN	Assessor Parcel Number
AQMP	Air Quality Management Plan
ARB	Air Resources Board
Ave.	Avenue
BBMWD	Big Bear Municipal Water District
BMPs	Best Management Practices
CA	California
CAA	Federal Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod™	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CALGreen Code	California Green Building Standards Code
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCR	California Code of Regulations
CEC	California Energy Commission
CEPA	California Environmental Protection Agency
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CH ₄	Methane
CHRIS	California Historic Resources Information System
CLAWA	Crestline Lake Arrowhead Water Agency
CLOMR	Conditional Letter of Map Revision
CMP	Congestion Management Program



ACRONYMS, ABBREVIATIONS, AND UNITS OF MEASURE

<u>Acronym</u>	<u>Definition</u>
CNEL	Community Noise Equivalent Level
CO	Carbon Monoxide
COG	Council of Governments
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide Equivalent
CPUC	California Public Utilities Commission
CWA	Clean Water Act
CZ	Change of Zone
dB	Decibel
dBA	A-weighted Decibels
DIF	Development Impact Fee
DPM	Diesel Particulate Matter
EO	Executive Order
E+P	Existing plus Project Conditions
EIR	Environmental Impact Report
EPA	Environmental Protection Agency
FEIR	Final Environmental Impact Report
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
GCC	Global Climate Change
GHG	Greenhouse Gas
GIS	Geographic Information System
GISD	Geographic Information Services Database
GPA	General Plan Amendment
GWP	Global Warming Potential
H ₂ S	Hydrogen Sulfide
HCM	Highway Capacity Manual
HFCs	Hydrofluorocarbons
HET	High-Efficiency Toilet
HI	Hazard Index
Highway 60	SR-60
HVAC	Heating, Ventilation, and Air Conditioning
I	Interstate



ACRONYMS, ABBREVIATIONS, AND UNITS OF MEASURE

<u>Acronym</u>	<u>Definition</u>
i.e.	that is
IEPR	Integrated Energy Policy Report
Interstate 15	I-15
IS	Initial Study
ISTEA	Intermodal Surface Transportation Efficiency Act of 1991
ITE	Institute of Transportation Engineers
JPA	Joint Powers Authority
kBTU	British Thermal Units
kg	kilogram
kWh	kilowatt-hour
LACSD	Lake Arrowhead Community Services District
LCA	Life-cycle analysis
LED	Light-Emitting Diode
LEED	Leadership in Energy and Environmental Design
Ldn	Day-night average level
Leq	equivalent continuous sound level
LID	Low Impact Development
Lmax	Maximum level measured over the time interval
Lmin	Maximum level measures over the time interval
LOMR	Letter of Map Revision
LOS	Level of Service
LSA	LSA Associates, Inc.
LSTs	Localized Significance Thresholds
M3	Cubic Meter
MA	Master Application
mg	milligrams
MICR	Maximum Individual Cancer Risk
M-M	Manufacturing-Medium
MM	Mitigation Measure
MMRP	Mitigation Monitoring and Reporting Program
MMTs	million metric tons
MMTCO _{2e}	million metric tons of carbon dioxide equivalent
MOE	Caltrans Measure of Effectiveness
Mph	Miles per hour
MPO	Metropolitan Planning Organization
MRZ-3	Mineral Resource Zone 3
MT	metric ton



ACRONYMS, ABBREVIATIONS, AND UNITS OF MEASURE

<u>Acronym</u>	<u>Definition</u>
MTCO ₂ e	Metric Tons of Carbon Dioxide Equivalent
N/A	Not Applicable
n.d.	no date
NAHC	Native American Heritage Commission
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NEPSSA	Narrow Endemic Plant Species Survey Area
NHPA	National Historical Preservation Act
No.	Number
NO	Nitric Oxide
NO ₂	Nitrogen Dioxide
NOX	Nitrogen Oxides
N ₂ O	Nitrous Oxide
NOA	Notice of Availability
NOC	Notice of Completion
NOP	Notice of Preparation
NPDES	National Pollutant Discharge Elimination System
O ₃	Ozone
OPR	Office of Planning and Research
Ord.	Ordinance
PCEs	Passenger Car Equivalents
PDF	Project Design Feature
PFCs	Perfluorocarbons
PM	Particulate Matter
PM _{2.5}	Fine Particulate Matter (2.5 microns or smaller)
PM ₁₀	Fine Particulate Matter (10 microns or smaller)
ppb	parts per billion
ppm	parts per million
pp.	pages
PPP	Plans, Policies, Programs
ppt	parts per trillion
PPV	Peak particle velocity
PRC	Public Resources Code
RCP	Regional Comprehensive Plan
REC	Recognized Environmental Concerns
RMS	Root-mean-square



ACRONYMS, ABBREVIATIONS, AND UNITS OF MEASURE

<u>Acronym</u>	<u>Definition</u>
ROGs	Reactive Organic Gasses
ROW	Right of Way
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
SF/s.f.	square foot or square feet
SB	Senate Bill
SCH	California State Clearinghouse (Office of Planning and Research)
SCS	Sustainable Communities Strategy
SDP	Site Development Plan
SF ₆	Sulfur Hexafluoride
SHS	State Highway System
SIP	State Implementation Plan
SoCal Edison	Southern California Edison
SoCal Gas	Southern California Gas
SO ₂	Sulfur Dioxide
SP	Specific Plan
SR	State Route
SRA	Source Receptor Area
St.	Street
SWPPP	Storm Water Pollution Prevention Plan
T-BACT	Toxics Best Available Control Technology
TAC	Toxic Air Contaminants
TEA-21	Transportation Equity Act for the 21st Century
TIA	Traffic Impact Analysis
TPM	Tentative Parcel Map
TSF	Thousand Square Feet
TUMF	Transportation Uniform Mitigation Fee
µg	microgram
UNFCCC	United Nations' Framework Convention on Climate Change
VdB	Velocity in decibels
VMT	Vehicle Miles Traveled
VOCs	Volatile Organic Compounds
VPH	Vehicles per Hour
WQMP	Water Quality Management Plan
Z-C	Zone Change



JURISDICTIONAL ACRONYMS LIST (SPECIFIC TO PROJECT JURISDICTION)

<u>Acronym</u>	<u>Definition</u>
LACP	Lake Arrowhead Community Plan
SBCFCD	San Bernardino County Flood Control District
SBCTA	San Bernardino County Transportation Authority
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCAQMP	South Coast Air Quality Management Plan
SoCAB	South Coast Air Basin
SWMD	San Bernardino County Solid Waste Management District



0.0 EXECUTIVE SUMMARY

In accordance with CEQA Guidelines Section 15123, this Chapter of the Draft Revised Environmental Impact Report (DREIR) provides a brief description of the Project; identification of significant effects and proposed mitigation measures or alternatives that would reduce or avoid those effects; areas of controversy known to the lead agency; and issues to be resolved including the choice among alternatives and whether and how to mitigate the significant effects.

0.1 BACKGROUND SUMMARY

The environmental review process for the proposed Church of the Woods Project (Project) began in 2003, with a project of larger scope. A Mitigated Negative Declaration (MND) was prepared, and on May 20, 2004, the San Bernardino County Planning Commission approved the Project and adopted the MND. On May 28, 2004, an appeal was filed and the Project Applicant resubmitted a smaller project design by removing the proposed on-site school. On February 14, 2005, the County of San Bernardino (County) circulated the Notice of Preparation (NOP) to the State Clearinghouse (SCH), Office of Planning and Research (OPR), responsible agencies, and other interested parties. A Draft EIR was prepared and circulated for public review and comment from April 14, 2010 to June 17, 2010 (2010 Draft EIR). During the review period, the County received comments in opposition of the Project. The County took no further action on the Project at that time.

The County of San Bernardino made the decision to prepare a Revised EIR pursuant to CEQA Guidelines Section 15088.5(a) as a result of the availability of new information. The County determined that a Draft Revised EIR (DREIR) is necessary because approximately eight years have elapsed since the circulation of the 2010 Draft EIR for public review and existing conditions should be reevaluated. A DREIR is also necessary to address the change in conditions resulting from the County of San Bernardino, Department of Public Works' purchase of a portion of land contained within the initial Project proposal to develop the Rimforest Storm Drain Project. The Rimforest Storm Drain Project was subject to an independent CEQA review and the EIR (SCH No. 2015051070) was certified by the County Board of Supervisors on May 23, 2017. Furthermore, a DREIR is necessary to reflect the revisions and modifications to the proposed Project's site plan. For the reasons stated above, the County of San Bernardino has elected to prepare a DREIR and to recirculate the entire document.

0.2 PROJECT SUMMARY

The Project involves the development of a church campus on an undeveloped property in the Rim Forest community of unincorporated San Bernardino County. The church campus would include an assembly building/children's ministry, a youth center gymnasium, a maintenance building/caretaker unit, a 600-seat worship center, various recreational fields and facilities, and parking. The facilities would be developed on approximately 13.6 acres of a 27.12-acre property.

The proposed Project would result in the development of approximately 13.6 acres (50%) of the Project site (6.4 acres of structures, drives, walks, and drainage features; 7.2 acres of sports fields, play areas, recreation, landscaping, and landscaped manufactured slopes). The remaining 13.5 acres (50%) of the site would be retained as open space, including hiking trails, fuel modification zones, and undisturbed forested areas.



Vehicular access onto the Project site would be provided by a private driveway connecting to Highway 18. A secondary emergency access would connect with Highway 18 approximately 400 feet east of the proposed driveway. The proposed Project would provide a total of 311 parking spaces, which would meet and exceed the County's Development Code minimum parking requirements¹.

A permanent fuel modification zone with a minimum width of 100 feet around all proposed structures would provide a fire break to deter the spread of a potential forest fire.² The extent of the fuel modification boundaries would be determined by the San Bernardino County Fire Department (SBCFD) based on the approval of a Fuel Modification Plan, which would be concurrent with the Project's approval.

0.3 AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

According to CEQA Guidelines Section 15123(b)(2)(3), the Executive Summary of an EIR shall identify potential areas of controversy and issues to be resolved by the decision-makers. Generally, these include those areas where a significant unavoidable impact has been identified as well as issue areas where concerns have been raised, primarily through the Notice of Preparation process, indicating a level of controversy. For the proposed Church of the Woods Project, significant unavoidable impacts would occur in the areas of cumulative biological resources (southern rubber boa, California spotted owl, and San Bernardino flying squirrel), noise, and transportation/circulation.

In addition, a number of comments were received by the County in response to the Notice of Preparation and comments received at the scoping meeting for a previous version of the proposed Project and in response to previous DEIR circulation and at public hearings, raising issues concerning grading and landslides (see Section 3.D, *Geology and Soils*); traffic (See Section 3.I, *Transportation and Circulation*); water supply and water quality (see Section 3.F, *Hydrology and Water Quality*); loss of trees and wildlife (see Section 3.C, *Biological Resources*); fire hazards and evacuation (see Section 3.E, *Hazards*); air quality (see Section 3.B, *Air Quality*); development along a scenic highway (see Section 3.A, *Aesthetics*); and Project alternatives (see Section 4.0, *Alternatives*). These constitute potential areas of controversy.

0.4 CLASSIFICATION OF ENVIRONMENTAL IMPACTS

Potential environmental impacts for the proposed Project are classified in this DREIR in the following three categories:

- Less-Than-Significant Impact – An adverse change in the physical environment would occur but the change would not be substantial or potentially substantial and would not exceed the threshold(s) of significance presented in this DREIR;
- Potentially Significant Impact – A substantial or potentially substantial adverse change in the physical environment would occur and would exceed the threshold(s) of significance presented in this DREIR, requiring the consideration of mitigation measures;

¹ County of San Bernardino 2007, *Development Code*, Section 83.11, Table 83-15 "Parking Requirements by Land Use."

² County of San Bernardino 2007 *Development Code*, Section 82.13.060(b)(6).



- Significant Unavoidable Impact – A substantial adverse change in the physical environment would occur and would exceed the threshold(s) of significance presented in this DREIR that cannot be feasibly mitigated to less-than-significant levels; or
- Cumulative Impacts - CEQA requires that an EIR contain an assessment of the cumulative impacts that may be associated with a proposed project. As noted in CEQA Guidelines Section 15130(a), “an EIR shall discuss cumulative impacts of a project when the project’s incremental effect is cumulatively considerable.” “A cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects creating related impacts” (CEQA Guidelines Section 15130(a)(1)).

All adverse physical environmental impacts identified in the County’s Initial Study (*Technical Appendix A*) as having a possibility of exceeding identified thresholds of significance are analyzed in Section 3.0, *Environmental Analysis*, of this DREIR. Those issues found to have no possibility of exceeding thresholds of significance are listed in Section 5.0, *Other CEQA Considerations*, of this DREIR.

0.5 ALTERNATIVES

The CEQA Guidelines Section 15126.6(a) requires an EIR to “describe the range of reasonable alternatives to the Project, or to the location of the Project, which would feasibly attain most of the basic objectives of the Project but would avoid or substantially lessen any of the significant effects of the Project, and evaluate the comparative merits of the alternatives.” CEQA Guidelines Section 15126.6(f) directs that selection of alternatives be guided by a “rule of reason” that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice.

As described in detail in Section 4.0 of this DREIR, three alternatives to the Project were identified, including a No Project Alternative, a No Project/Feasible Development Alternative, and a Reduced Project/Alternative Site Design Alternative. Based on an analysis of these alternatives, an environmentally superior alternative is identified. The three identified alternatives, as well as the identified environmentally superior alternative, are summarized below. As required by the CEQA Guidelines, alternative locations were identified but rejected because the applicant owns the Project site and, due to economic and time constraints, it would not be feasible for the applicant to acquire, control, or otherwise have access to other alternative properties.

No Project/No Build Alternative: The No Project/No Build Alternative assumes that no development/discretionary actions, which are subject to CEQA review, would occur pertaining to the Project site beyond that which occurs under existing conditions. Under this primary assumption, the Project would not be constructed and the Project site would remain as undeveloped forested land.

No Project/Feasible Development Alternative: In accordance with CEQA Guidelines Section 15126.6(e)(3)(B), the No Project Alternative may discuss “predictable actions by others, such as some other Project if disapproval of the Project under consideration were to occur.” CEQA Guidelines Section 15126.6(e)(3)(C) further states that the No Project Alternative should anticipate “what would reasonably be expected to occur in the foreseeable future if the Project were not approved based on current plans and consistent with available infrastructure and community services.”



Therefore, the No Project/Feasible Development Alternative assumes the potential development of 10,000 square feet of manufacturing or warehouse use due to the site's physical constraints. This alternative would be constructed on approximately 5 acres of the Project site and is based on the provisions for development within the Community Industrial (IC) District.

Reduced Project/Alternative Site Design Alternative: The Reduced Project/Alternative Site Design Alternative would reduce the major components and capacity of the Project by approximately 25% while avoiding grading and disturbance of natural vegetation within an approximately 200-foot setback along Highway 18. Grading and clearance of vegetation along the highway would be limited to what is required to construct the entry and emergency access roads. This alternative would also minimize disturbance of natural vegetation and increase the setback between proposed playfields and existing residential uses located along the Project's southwestern boundary while also substantially avoiding alteration of the natural drainage that runs from the southwest to the northeast corner of the site. In addition, no temporary outdoor amphitheater would occur under this alternative.

Environmentally Superior Alternative: The Reduced Project/Alternative Site Design would be the environmentally superior alternative. This alternative would reduce impacts on aesthetics, air quality, land use, and noise to a greater extent than the No Project/Feasible Development Alternative and the proposed Project. The rest of the impacts would be similar to the proposed Project.

0.6 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Table 0.0-1 beginning on page 0-5 presents a summary of the environmental impacts associated with the proposed Project, the mitigation measures that would reduce or avoid those effects, and the level of significance of the impacts following implementation of the mitigation measures.



Table 0.0-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
A. Aesthetics		
<u>Threshold a:</u> The County of San Bernardino General Plan does not designate any scenic vistas. Additionally, the Project site does not contain any designated scenic vistas. Moreover, views of the Project would be limited due to the dense tree cover that characterizes the Project site.	No mitigation is required.	Less-than-Significant Impact
<u>Threshold b:</u> The Project site does not contain any roadways or vista points that provide vistas of undisturbed natural areas. No unique or unusual features occur on the Project site that comprise a dominant part of the viewshed. Additionally, the Caltrans Scenic Highway Mapping System indicated that there are no officially designated State or County Scenic Highways in the vicinity of the Project site.	No mitigation is required.	Less-than-Significant Impact
<u>Threshold c:</u> During Project construction there would be a temporary change in the Project's visual character. Following the completion of Project development, all construction equipment would be removed from the Project site. The developed Project site would change from predominantly undisturbed forested land to a church campus with associated roadways, landscaping, recreational facilities, and infrastructure. The Project would alter views from the SR-18 corridor looking north. However, the Project would not result in substantial physical degradation of the existing visual character.	No mitigation is required.	Less-than-Significant Impact



Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
<i>B. Air Quality</i>		
<u>Threshold a:</u> The Project's localized construction-source emissions would not exceed the applicable level of significance thresholds nor cause or contribute new violations. Additionally, the Project's proposed features would be consistent with the Community Industrial development standards enforced by the San Bernardino County General Plan and would be subject to a Conditional Use Permit.	No mitigation is required.	Less-than-Significant Impact
<u>Threshold b and c:</u> Project-related construction would not violate any air quality standard or contribute substantially to an existing or projected air quality violation. The Project would not result in a net increase of any criteria pollutant for which the Project region is in non-attainment under applicable federal or State ambient air quality standard. The Project would not emit substantial concentrations of CO, SOX, NOX, ROG, PM10, or PM2.5 during long-term operation and would not cause or contribute to an existing or projected air quality violation, on either a direct or cumulatively considerable basis.	No mitigation is required.	Less-than-Significant Impact
<u>Threshold d:</u> Construction of the Project would not result in the exposure of any sensitive receptors to substantial pollutant concentrations. Operational emissions would not exceed the SCAQMD's LSTs for any criteria pollutant at the nearest sensitive receptor. The Project would not result in a new or contribute to CO Hot Spots. Project generated traffic trips are not anticipated to result in CO concentrations exceeding the State or federal CO standards	No mitigation is required.	Less-than-Significant Impact



Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
<u>Threshold e:</u> The Project could produce odors during construction; however, standard construction practices would minimize odors. During long-term operation, the proposed Project would include a church campus with sports fields and sport courts, which are not typically associated with objectionable odors. The proposed Project would be required to comply with SCAQMD Rule 402, which prohibits the discharge of odorous emissions.	No mitigation is required.	Less-than-Significant Impact
<i>C. Biological Resources</i>		
<u>Threshold a:</u> The Project site contains suitable habitat for three special-status species in the region, which include the Southern Rubber Boa, California Spotted Owl, and San Bernardino Flying Squirrel. Implementation of the Project would result in the direct removal of suitable habitat for these species. The Project site and the surrounding area has the potential to refuge nesting birds. The proposed Project has the potential to disrupt nesting if construction occurs between February 1 st and August 31 st .	MM-3.C1(A Prior to the issuance of any grading permits, the Project Applicant shall provide evidence to the Public Works Director or their designee, and the Development Services Director or their designee, that the following actions have or will be implemented. <ul style="list-style-type: none">• A pre-construction clearance survey for southern rubber boa, San Bernardino flying squirrel and California spotted owl shall be conducted at the Project site by an approved biologist no less than 30 days prior to any ground disturbing activities.• A copy of the results of the pre-construction survey (and any additional surveys) shall be provided to the San Bernardino County Planning Department prior to the issuance of a grading permit or the granting of any authorization for any vegetation clearing and ground disturbance activities at the Project site.	Cumulatively Considerable



Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<ul style="list-style-type: none">o If the results are negative, the County may issue the grading permit.o If southern rubber boa, San Bernardino Flying squirrel or California spotted owl are detected on-site during the preconstruction clearance survey(s), the Project Biologist shall notify the California Department of Fish and Wildlife (CDFW) immediately.• An approved biologist shall be onsite during all vegetation clearing and rough grading. In the event that southern rubber boa, San Bernardino Flying squirrel or California spotted owl are detected on-site during vegetation clearing or rough grading activities, the approved biologist shall have authority to halt vegetation clearing and/or rough grading activities until remedial measures determined by the Project Biologist are implemented and until a suitable buffer has been established as identified by the Project Biologist. Vegetation clearing and/or rough grading activities shall only be allowed to commence within the buffer area once the approved biologist makes a determination that the species is no longer present. <p>MM-3.C1(b) Prior to the issuance of any grading permits, the Project Applicant shall provide evidence to the Public Works Director or their designee and the Development Services Director and their designee that the</p>	



Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>Project Applicant has provided for the permanent preservation and management in perpetuity of 13.40 acres of onsite habitat that supports a total of 1.65 available onsite acres of high-quality southern rubber boa habitat, 2.18 acres of moderate quality southern rubber boa habitat and 9.57 acres of low quality southern rubber boa habitat, 5.45 acres of moderate quality San Bernardino flying squirrel habitat and 7.95 acres of low-quality San Bernardino flying squirrel habitat; and 5.85 acres of moderate-quality California spotted owl habitat and 7.55 acres of low-quality California spotted owl habitat. The onsite habitat shall be permanently protected through the recordation of a CDFW-approved conservation easement, the selection of a CDFW-approved conservation management entity and by funding a “non-wasting” endowment that provides for the costs associated with any initial improvements and management actions as defined in a Long-term Management Plan. The long-term management plan shall be submitted to CDFW for review and approval.</p>	
<p>Threshold b and c: A single drainage feature containing riparian habitat is located within the southwest portion of the Project site. This drainage feature does not contain any wetland or wetland vegetation. The drainage feature is proposed to be a part of the County’s Rimforest Strom Drain Project; however, the proposed Project has the potential to be implemented prior to the County’s Storm Drain Project. The Project has the potential to result in direct impacts to the riparian habitat. The Project site</p>	<p>MM-3.C2(c) Prior to the issuance of any grading plan prior to the start of any on-site construction of facilities associated with the Rimforest Flood Control Project, the Project Applicant shall provide evidence to the Public Works Director or their designee and the Development Services Director or their designee that the Project Applicant has secured the following regulatory approvals:</p>	<p>Less-than-Significant Impact with Mitigation</p>



Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
does not contain any special-status plant species and it predominantly contains a mixed conifer forest plant community, which is relatively common for the San Bernardino Mountains. The Project would remove common plant species that are abundant in the region.	Clean Water Act (CWA) Section 404 Nationwide Permit No. 39: Commercial and Institutional Developments, CWA Section 401 Water Quality Certification, and California Department of Fish and Wildlife (CDFW) Section 1602 Lake or Streambed Alteration Agreement.	
<u>Threshold e:</u> The proposed Project would not result in significant conflicts with any applicable policy established by the San Bernardino General Plan or Lake Arrowhead Community Plan. Additionally, neither does the San Bernardino General Plan nor the Lake Arrowhead Community Plan have a tree preservation policy or ordinance.	No mitigation is required.	Less-than-Significant Impact
<u>Threshold f:</u> The Project site is located within the Lake Arrowhead Community Plan, which is not located within an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approval local, regional, or state HCP. No HCPs have been approved and none are in the process of approval for the lands within the San Bernardino Mountains.	No mitigation is required.	Less-than-Significant Impact
<i>D. Geology and Soils</i>		
<u>Threshold a:</u> The Project site is not located within any Alquist-Priolo Earthquake Fault Zones and no known faults underlie the site. The Project site would not be exposed to fault rupture during a seismic event. The potential for liquefaction on the Project site is non-existent, although the northeasterly areas of the on-site drainage course may have some liquefaction potential. However, the Project is required to comply with current State and Local building and safety codes and the San Bernardino County Development Code. The Project site is located within an area of “moderate to high” landslide susceptibility. Development of the Project would further	MM 3.D-1 Prior to issuance of any grading permit, the San Bernardino County Building Official or their designee shall confirm that the Grading Plan incorporates specific measures from the required design-level geotechnical investigation which shall, at a minimum, address landslides, liquefaction, lateral spreading, and collapsible soils. The geotechnical investigation report and the measures that shall be included as notes on the Grading Plan and shall comport with the provisions established in Chapter 87.08, Soils	Less-than-Significant Impact with Mitigation



Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
disturb the subsurface environment and could potentially exacerbate the occurrence of landslides at the site.	Reports, and Chapter 88.02, Soil and Water Conservation, of the San Bernardino County Code. Remedial measures to address landslides may include, but not be limited to: removal, repositioning, embedment, anchoring of boulders; installation of catchment fences; and construction in accordance with the recommendations of the Project geotechnical engineer, CALGreen and any County guidelines. Potential remedial measures that may be required to address collapsible soils may include, but not be limited to, over-excavation of all uncontrolled artificial fill and upper portion of the surficial soils during site grading. Remedial measures to address liquefaction may include, but not be limited to, specialized compaction techniques and cement or chemical grouting. Prior to issuance of any grading permit, the San Bernardino County Building Official shall ensure that any and all remedial measures identified in the Project-specific geotechnical investigation are incorporated as notes on all final Project construction plans so that they may be implemented during Project grading and construction activities.	
<u>Threshold b:</u> Grading activities associated with the proposed Project would temporarily expose underlying soils in the Project's grading footprint to water and air, which would increase erosion susceptibility. The Project would be required to obtain coverage under NPDES permit for construction activities. Additionally, the Project would be required to prepare a SWPPP that would address construction fencing, sand bags, and other erosion control features. The Project would also comply with SCAQMD Rule 403 – Fugitive Dust, which would	No mitigation is required.	Less-than-Significant Impact



Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
minimize wind related erosion. Following construction, wind and water erosion on the Project site would be minimized, as previously disturbed areas would be landscaped. A bioretention basin would be developed at the south-central portion of the Project site and would receive storm water flows. The Project would be required to prepare and submit a Project specific SWPPP and Final WQMP, which would identify and implement an effective combination of erosion control and sediment control measures.		
<u>Threshold c:</u> The Project site is located in an area that is susceptible to landslides. The Project would be designed and constructed to incorporate the recommendations of the Project specific geotechnical investigation and would not create conditions that would result in the occurrence of an on- site or off-site landslide. The sloped areas of the Project site may potentially be susceptible to lateral spreading. The Rimforest Storm Drain Project is anticipated to commence prior to the proposed Project and would remove or recompact soils susceptible to lateral spreading and liquefaction. However, it is unknown whether the Storm Drain Project would remove all the soils susceptible to lateral spreading and liquefaction. Therefore, there would be a potential for the Project site to contain soils susceptible to lateral spreading and liquefaction. The majority of the Project site is underlain by granite bedrock at shallow depths and the potential for subsidence along these areas is considered non-existent. Nonetheless, the Project would be subject to the requirements established by the State and local building and safety codes. The Project site contains older alluvial soils, which is susceptible to collapse if left in place and exposed to weight. The Project has the potential to located on geologic soil that is unstable.	MM 3.D-1 shall apply. MM 3.D-2 MM 3.D-2 Prior to the issuance of any grading permit, the San Bernardino County Building Official shall confirm that the Grading Plan incorporates specific measures from the required design-level Project-specific geotechnical investigation to address lateral spreading. The geotechnical investigation report shall comport with the provisions established in Chapter 87.08, Soils Reports, and Chapter 88.02, Soil and Water Conservation, of the San Bernardino County Code. Remedial measures shall be undertaken as recommended by the licensed geotechnical engineer and approved by the County as part of the grading operation and construction phases. Remedial measures to address lateral spreading may include, but not be limited to: removal and re-compaction of near surface soils, the use of deep foundations and/or stone columns, and deep dynamic compaction. The remedial measures undertaken shall ensure that potential lateral movements calculated as part of the geotechnical exploration and	Less-than-Significant Impact with Mitigation



Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	analysis can accommodate habitable structures pursuant to CALGreen requirements as well as paved roads and wet or dry utilities, and thereby safeguard habitable structures, roads, and utility lines against potential seismic hazards. The findings of the geological explorations and recommendations shall be documented in a Project-specific geotechnical investigation report prepared by a licensed geotechnical engineer. The report shall be approved by the County and the recommendations contained in the report shall be implemented and required as grading permit and building permit conditions of approval. Prior to issuance of any grading permit, the San Bernardino County Building Official shall ensure that any and all remedial measures identified in the Project-specific geotechnical investigation are incorporated as notes on all final Project construction plans so that they may be implemented during Project grading and construction activities.	
<u>Threshold d:</u> The Project site contains granular soils in the upper materials, which are considered to have very low expansion potential.	No mitigation is required	Less-than-Significant Impact
<i>E. Hazards</i>		
<u>Threshold a:</u> Emergency access and evacuations routes occur within the vicinity of the Project site. The Project's proposed occupants are anticipated to already live in the area; therefore, the Project would not meaningfully change the number of people requiring evacuation down the mountain during a major wildfire. Fire services for	No mitigation is required	Less-than-Significant Impact



Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
the Project would be provided by 3 local CFFPD Fire Stations and assistance would be supplemented by PCFs. Additionally, fire services would be reduced through Project compliance with applicable statutes, codes, ordinances, and standards of the CFFPD.		
<u>Threshold b:</u> The Project site is located within a “Very High Fire Hazard Severity Area.” The Project has the potential to expose people and structures to wildland fire hazards. However, the Project has been designed to meet or exceed fire hazard requirements established by the County, CFFPD, and USFS. Additionally, proof of compliance would be required as a standard condition of Project approval, site grading, issuance of building permit, and Project occupancy.	No mitigation is required.	Less-than-Significant Impact
<u>Threshold c and d:</u> The Project site is located approximately 11.0 miles south of the Hesperia Airport and approximately 25 miles northeast of the Ontario International Airport. The Project site is not located within an Airport Safety Review Area and does not have the potential to expose people residing or working in the Project area to hazards associated with public airport or private airstrips.	No mitigation is required.	Less-than-Significant Impact
<i>F. Hydrology and Water Quality</i>		
<u>Threshold b.</u> The Project does not propose the use of groundwater. The groundwater at the Project site is anticipated to consist of insignificant amounts of perched water and limited amount of water within the fractures of the bedrock.	No mitigation is required.	Less-than-Significant Impact
<u>Threshold c, d, and e:</u> The Project would alter the Project site and would result in a nominal increase in the overall drainage area’s Q value. Onsite flows would be discharged to the existing drainage course (as modified by the Rimforest Flood Control Project) and overall	No mitigation is required.	Less-than-Significant



Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
topography would not be substantially altered by Project development.		
<u>Threshold a and f:</u> The Project would be required to submit a SWPPP to address erosion control and water quality measures during and after construction to obtain a NPDES construction general permit. The Project would implement and monitor BMPs to support the elimination or reduction of pollutants to comply with applicable water quality standards. The Project prepared a Project specific WQMP that identifies operational structural and non-structural BMPs that would be incorporated into the Project's operation and maintenance.	No mitigation is required.	Less-than-Significant Impact
<u>Threshold g and h:</u> According to the FEMA Flood Insurance Rate Map No. 06071C7955H, the Project site is not located within a special flood hazard zone area that is subject to inundation by a 1% annual flood. Additionally, the proposed Project is a commercial development and would include on housing facility to accommodate the on-site caretaker. The on-site water drainage system would convey storm water to the natural drainage feature in a similar manner that occurs under existing conditions.	No mitigation is required.	Less-than-Significant Impact
<u>Threshold i:</u> The Project site is not located within a special flood hazard area subject to a 100-year flooding event nor is the Project site within an area subject to the protection of levees. Additionally, the County's General Plan Hazards Overlay does not identify any portions of the Project site to be impacted by flooding as a result of a dam or levee failure.	No mitigation is required	Less-than-Significant Impact
<u>Threshold j:</u> The Project does not propose the construction of any large bodies of water or located near a large body of water that could be affected by a seiche. The Project site's potential to be affected by a tsunami is	Mitigation Measures MM 3.D-1 and MM 3.D-2 shall apply	Less-than-Significant Impact with Mitigation



Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
non-existent. The Project site is located more than 50 miles from the Pacific Ocean and is approximately 5,680 feet amsl. The Project site does contain soils that are susceptible to landslides. Therefore, the Project has the potential to expose people and structures to landslide or mudslide events.		
G. Land Use		
<u>Threshold b:</u> The Project would not be inconsistent with any of the policies of the San Bernardino County General Plan, Lake Arrowhead Community Plan, San Bernardino County Development Code, or the San Bernardino National Forest Land Management Plan. The Project would be consistent with the 2016-2040 RP/SCS policies, strategies, and objectives.	No mitigation is required.	Less-than-Significant Impact
H. Noise		
<u>Threshold a, c, d.</u> Temporary construction noise has the potential to generate excessive noise levels that may affect nearby sensitive receptors. Project operational noise is not anticipated to generate excessive noise nor expose sensitive receptors to excessive noise. The noise level increase due to Project operation would not be perceptible by the human auditory system.	MM-H1: Prior to the issuance of a grading permit, the County of San Bernardino Building Official shall ensure that the following notes are included on all grading plans and shall be enforced by the construction contractor during all excavation and grading activities: 1. During all site excavation and grading, the Construction Contractor shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers consistent with manufacturer's standards. 2. The Construction Contractor shall position all stationary construction equipment so that emitted noise is directed away from off-site residences nearest the Project site. 3. The Construction Contractor shall locate equipment staging within portions of the	Significant and Unavoidable



Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	Project site that shall will create the greatest distance between construction-related noise sources and off-site residences nearest the Project site during all Project construction. 4. Heavy construction activities, such as grading and/or compacting, that would occur within 300 feet of the western property line shall be restricted to the hours of 10:00 a.m. to 4:00 p.m.	
<u>Threshold b:</u> The Project would not expose persons to excessive groundborne vibration during Project construction or operation. The Project's anticipated land use is not typically associated with the generation of excessive vibration.	No mitigation is required.	Less-than-Significant Impact
<u>Threshold e and f:</u> The Project is not located within the vicinity of a public or private airstrip. The Project would not expose sensitive receptors to excessive noise associated with aviation.	No mitigation is required.	Less-than-Significant Impact
<i>1. Transportation and Circulation</i>		
<u>Threshold a:</u> The Project would conflict with the level of service for several intersections within the Project's traffic study area under all traffic scenarios.	MM 3.I-1 Prior to issuance of an occupancy permit for the Project, the San Bernardino County Director of Public Works or their assignee shall verify that the Project Applicant has made a good faith effort to gain the approval of Caltrans to implement the intersection improvements identified below in accordance with the recommendations identified in the Traffic Impact Analysis (TIA) prepared by Translutions, Inc., dated September 12, 2018. If Caltrans approval is granted, the Project Applicant shall be responsible for ensuring installation of the traffic signals.	Significant and Unavoidable and Cumulatively Considerable



Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<ul style="list-style-type: none">Intersection #4 – Bear Springs Road/State Route 18: install a traffic signal at the intersection.Intersection #18 – Pine Avenue/State Route 18: install a traffic signal at the intersection. <p>MM 3.I-2 In the event that Caltrans prepares a valid study, as defined below, that identifies fair share contribution funding sources attributable to and paid from private and public development to supplement other regional and State funding sources necessary undertake improvements to intersections along SR-18 and/or SR-189 in the Project study area, then the Project Applicant shall use reasonable efforts to pay the applicable fair share amount to Caltrans.</p> <p>The study shall include fair share contributions related to private and/or public development based on nexus requirements contained in the Mitigation Fee Act (Govt. Code § 66000 et seq.) and 14 Cal. Code of Regs. Section 15126.4(a)(4) and, to this end, the study shall recognize that impacts to Caltrans SR-18 and/or SR-189 facilities that are not attributable to development located within unincorporated San Bernardino County that are not required to pay in excess of such developments' fair share obligations. The fee study shall also be compliant with Government Code Section 66001(g) and any other applicable provisions of law. The study shall set forth a timeline and</p>	



Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>other relevant criteria for implementation of the recommendations contained within the study to the extent the other agencies agree to participate in the fee study program. Specifically, the fair share fee payment required by this Mitigation Measure shall be used by Caltrans to make the following improvements in accordance with the recommendations identified in the Traffic Impact Analysis (TIA) prepared by Translutions, Inc., dated September 12, 2018:</p> <ul style="list-style-type: none">• Daley Canyon Road/State Route 189 (Intersection #8): install a traffic signal at the intersection. The Project's fair share of this improvement shall be 58.7%• Daley Canyon Road/State Route 18 (Intersection #10): install a traffic signal at the intersection. The Project's fair share of this improvement shall be 48.3%.• Daley Canyon Access Road/State Route 18 (Intersection #11): install a traffic signal at the intersection. The Project's fair share of this improvement is 30.3%.• State Route 173/State Route 18 (Intersection #17): install a traffic signal at the intersection. The Project's fair share of this improvement is 22.0%.• Pine Avenue/State Route 18 (Intersection #18): install a traffic signal at the intersection. The Project's fair share of this improvement is 32.3%.	
<p><u>Threshold b:</u> The Project's traffic study area included 18 intersections, three of which are under the jurisdiction of the County of San Bernardino. The remaining 15</p>	<p>No mitigation is required.</p>	<p>Less-than-Significant Impact</p>



Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
intersections are under the jurisdiction of Caltrans. The Project would impact several intersections under the jurisdiction of Caltrans. The Project would not result in significant impacts to intersections under the jurisdiction of the County as part of the CMP.		
<u>Threshold c:</u> The Project does not include an air travel component; therefore, air traffic volumes would not be changed as a result of the Project. The Project is not located within the vicinity of an airport, airstrip, or helipad.	No mitigation is required.	Less-than-Significant Impact
<u>Threshold d:</u> The Project proposes a signalized driveway along SR-18 that would accommodate ingress and egress from the Project site. All improvements proposed by the Project within public rights-of-ways would be installed in conformance with Caltrans and County of San Bernardino design standards. The County of San Bernardino Public Works Department reviewed the Project's application materials and determined that no hazardous transportation design features would be introduced by the Project. The Project would be consistent with the existing "Community Industrial (IC)" General Plan land use designation applicable to the Project site, and would also be compatible with existing and planned commercial, residential, and resource conservation land uses located adjacent to the Project site.	No mitigation is required.	Less-than-Significant Impact
<u>Threshold e:</u> The Project would provide a driveway to the east of the Project driveway on SR-18 that would be restricted to emergency access vehicles. Furthermore, the County would review all future Project construction drawings to ensure that adequate emergency access is maintained along abutting public streets during temporary construction activities.	No mitigation is required.	Less-than-Significant Impact



Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
<u>Threshold f:</u> Under existing conditions, there is no transit route that serves the Project site; however, the Rim of the Mountain bus route runs along SR-18 to the immediate south of the Project site. The nearest bus stop is located approximately 500 feet to the west-southwest of the Project site. The proposed Project does not include any components that would impede operation of bus service. There are no existing or planned pedestrian facilities in the vicinity of the Project site. The proposed Project is designed to encourage pedestrian movement and enhance connectivity within the Project site through the incorporation of pedestrian facilities that includes the construction of sidewalks throughout the Project site. The San Bernardino County Planning Department conducted a review of the proposed Project, and determined that the Project would comply with, or otherwise would not conflict with, policies, plans, or programs regarding public transit, bikeways, or pedestrian facilities.	No mitigation is required	Less-than-Significant Impact
<i>J. Greenhouse Gas Emissions</i>		
<u>Threshold a:</u> The Project's total annual GHG emissions would not exceed the County's GHG Reduction Plan threshold of 3,000 MTCO ₂ e/year and would therefore not generate substantial GHG emissions – neither directly or indirectly – that would have a significant impact on the environment.	No mitigation is required.	Less-than-Significant Impact
<u>Threshold b:</u> The Project would not conflict with applicable regulations, policies, plans, and policy goals adopted for the purpose of reducing GHG emissions.	No mitigation is required.	Less-than-Significant Impact



1.0 INTRODUCTION

1.1 PURPOSE AND OVERVIEW OF THE EIR PROCESS

This Draft Revised Environmental Impact Report (DREIR) has been prepared in accordance with all criteria, standards, and procedures of CEQA (California Public Resource Code § 21000 *et seq.*) and the CEQA Guidelines (California Code of Regulations, Title 14, Division 6, Chapter 3, Section 15000 *et seq.*)

Pursuant to CEQA Section 21067 and CEQA Guidelines Article 4 and Section 15367, the County of San Bernardino is the Lead Agency under whose authority this DREIR has been prepared. “Lead Agency” refers to the public agency that has the principal responsibility for carrying out or approving a project. Serving as the Lead Agency and before taking action to approve the Project, the County of San Bernardino has the obligations to: (1) ensure that this DREIR has been completed in accordance with CEQA; (2) review and consider the information contained in this EIR as part of its decision making process; (3) make a statement that this EIR reflects the County of San Bernardino’s independent judgment; (4) ensure that all significant effects on the environment are eliminated or substantially lessened where feasible; and, if necessary (5) make written findings for each unavoidable significant environmental effect stating the reasons why mitigation measures or project alternatives identified in this DREIR are infeasible and citing the specific benefits of the proposed Project that outweigh its unavoidable adverse effects (CEQA Guidelines Sections 15090 through 15093).

This DREIR provides objective information in a logical format to allow County of San Bernardino staff, the County’s Planning Commission, the County’s Board of Supervisors, Responsible and Trustee Agencies, and the general public to inform themselves of the environmental consequences associated with the proposed Project. If certified, the Final Revised EIR will be used by the Lead Agency (County of San Bernardino) and Responsible and Trustee Agencies, as defined by CEQA, to evaluate, disclose, and mitigate to the extent feasible, the environmental effects associated with planning, constructing, and operating the proposed Project.

The environmental review process provides opportunities for the public to participate through scoping, public notice, and public review of CEQA documents, and public hearings. Additionally, lead agencies are required to consider comments from the scoping process in the preparation of the Draft Revised EIR and to respond to public comments in a Final Revised EIR.

1.2 ADMINISTRATIVE BACKGROUND

The environmental review process for the Project began in 2003, with a project of larger scope than what is currently proposed. A Mitigated Negative Declaration (MND) was prepared, and on May 20, 2004, the San Bernardino County Planning Commission approved the previously proposed Project and adopted the MND. On May 28, 2004, an appeal was filed and the Project Applicant decided to resubmit a smaller project by removing the proposed school. On February 14, 2005, the County of San Bernardino circulated a Notice of Preparation (NOP) for an Environmental Impact Report (EIR) to the State Clearinghouse, Office of Planning and Research, Responsible and Trustee Agencies, and other interested parties. The County prepared and circulated a Draft EIR for public review and comment from April 14 to June 17, 2010 (2010 Draft EIR).



Comments were received by the County on the 2010 Draft EIR and in opposition of the Project during the review period. The County took no further action on the Project at that time.

On April 2017, the Project Applicant submitted a revised Conditional Use Permit (CUP) application for the currently-proposed Project. The County decided to prepare a Draft Revised EIR (DREIR) pursuant to CEQA Guidelines Section 15088.5(a) as a result of the availability of new information. Additionally, the County determined that a DREIR was needed because approximately eight years had elapsed since the prior Draft EIR was circulated for public review. A DREIR also was determined necessary to address the change in conditions resulting from the County of San Bernardino, Department of Public Works purchase of a portion of the previously proposed Project site for the Rimforest Storm Drain Project, which occupied approximately 10.0 acres of land within the initial project's proposal. That purchase and related storm drain project were subject to an independent CEQA review with the EIR (SCH No. 2015051070) certified by the San Bernardino County Board of Supervisors on May 23, 2017. Finally, a DREIR is necessary to reflect site plan revisions and modifications, including the elimination of the previously proposed northern baseball field, facilities and drive aisle, the elimination of the southern baseball field and the relocation of some of the proposed buildings. For these reasons, the County has elected to prepare a DREIR and to recirculate the entire document. CEQA Guidelines Section 15088.5 (f) gives the Lead Agency discretion on how to respond to comments received on the initial Draft EIR. The County of San Bernardino decided that they will not be responding to comments made during the public review of the 2010 Draft EIR, however the County will be accepting new comments for this DREIR.

1.3 NEED FOR THE DREIR

Pursuant to CEQA Guidelines Section 15088.5(a), the following provides under what conditions a Lead Agency is required to recirculate an EIR:

A lead agency is required to recirculate an EIR when significant new information is added to the EIR after public notice is given of the availability of the draft EIR for public review under Section 15087 but before certification. As used in this section, the term "information" can include changes in the project or environmental setting as well as additional data or other information. New information added to an EIR is not "significant" unless the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible mitigation measure to avoid such an effect (including a feasible project alternative) that the project's proponents have declined to implement. "Significant new information" requiring recirculation include, for example, a disclosure showing that:

- 1) A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented.
- 2) A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance.
- 3) A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the significant environmental impacts of the project, but the project's proponent's decline to adopt it.



- 4) The draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded.

It has been approximately eight years since the 2010 Draft EIR was circulated for public review and comment, and approximately 13 years since the NOP was posted for public review. To thoroughly evaluate the environmental effects of the proposed Project, the County determined that existing conditions should be reevaluated. The County also determined that the proposed Project's environmental evaluation should consider the Rimforest Storm Drain Project Final EIR that was certified by the County of San Bernardino in May 23, 2017 (SCH No. 2015051070) because the Rimforest Storm Drain Project occupies approximately 10.0 acres of land that was initially proposed as part of the previously proposed Church of the Woods Project that is not currently part of the currently-proposed Project.

1.4 SCOPE OF THE DREIR

Pursuant to State CEQA Guidelines Section 15063, an Initial Study and a NOP were prepared and distributed to Responsible and Trustee agencies, other affected agencies, and other interested parties on February 10, 2005 and was recirculated on March 11, 2005. The NOP was posted in the San Bernardino County Clerk's office for 30 days and is a required document that must be submitted to the State Clearinghouse to officially solicit participation in determining the scope of the EIR. Information requested and input provided regarding the scope of the EIR are included in this DREIR. Additionally, a public scoping meeting was held on March 30, 2005 at the Mountain Communities Senior Citizens Center in Twin Peaks to gather input from the local communities regarding the scope of environmental analysis. A copy of the Initial Study and NOP, responses to the NOP, and a summary of comments received during the scoping meeting are provided in *Technical Appendix A*.

The content of this DREIR was established based on the findings in the Initial Study, dated March 11, 2005, and public and agency input received during the scoping process. Pursuant to the CEQA Guideline Section 15143, the analysis in the DREIR is focused on issues determined in the Initial Study to be potentially significant, whereas issues found in the Initial Study to have less than significant impacts or no impact do not require further evaluation. Based on the analysis contained in the Initial Study, and recent legislation (AB 32 and SB 97) and public concern regarding greenhouse gas (GHG) emissions and global climate change this EIR analyzes in detail the following environmental issues:

- Aesthetics
- Air Quality
- Biological Resources
- Geology and Soils
- Hazards
- Hydrology and Water Quality
- Land Use
- Noise
- Transportation and Circulation
- Greenhouse Gas Emissions

1.5 DOCUMENT FORMAT

This DREIR contains all of the information required to be included in an EIR as specified by the CEQA Statutes and Guidelines (California Public Resources Code, Section 21000 et. seq. and California Code of Regulations, Title 14, Chapter 5). CEQA requires that an EIR contain, at a minimum, certain specified content.



Table 1-1, *Required DREIR Topics*, provides the location of CEQA Required Topics in this DREIR, provides a quick reference in locating the CEQA-required content within this document.

Table 1-1 Required DREIR Topics

CEQA Required Topic	CEQA Guidelines Reference	Location in this DREIR
Table of Contents	Section 15122	Table of Contents
Executive Summary	Section 15123	Section 0.0
Project Description	Section 15124	Section 2.0
Environmental Setting	Section 15125	Sections 3.A through 3.J
Consideration and Discussion of Environmental Impacts	Section 15126	Sections 3.A through 3.J and Section 5.0
Significant Environmental Effects Which Cannot be Avoided if the Proposed Project is Implemented	Section 15126.2(b)	Sections 3.A through 3.J and Section 4.0
Significant Irreversible Environmental Changes Which Would be Caused by the Proposed Project Should it be Implemented	Section 15126.2(c)	Section 4.0
Growth-Inducing Impact of the Proposed Project	Section 15126.2(d)	Subsection 4.3
Analysis of the Project's Energy Conservation Measures	Section 15126.4(c)	Subsection 4.4
Consideration and Discussion of Mitigation Measures Proposed to Minimize Significant Effects	Section 15126.4	Sections 3.A through 3.J and Section 5.0
Consideration and Discussion of Alternatives to the Proposed Project	Section 15126.6	Section 4.0
Effects Not Found to be Significant	Section 15128	Sections 3.A through 3.J and Section 5.0
Organizations and Persons Consulted	Section 15129	Section 7.0
Discussion of Cumulative Impacts	Section 15130	Sections 3.A through 3.J and Section 4.0
Energy Conservation	Appendix F	Subsection 4.4



In summary, the content and format of this DREIR is as follows:

- **Section 0.0, Executive Summary**, includes an introduction to the Project, a summary of areas controversy/issues to be resolved, as well as a description of the Project alternatives and a summary of the Project's significant environmental impacts, and, mitigation measures.
- **Section 1.0, Introduction and Purpose**, provides introductory information about the CEQA process and the responsibilities of the County of San Bernardino, serving as the Lead Agency of this DREIR. This section also includes a description of the document form as well as the purpose of CEQA and this DREIR.
- **Section 2.0, Project Description**, serves as the DREIR's Project Description for purposes of CEQA and contains a level of specificity commensurate with the level of detail proposed by the Project, including the summary requirements pursuant to CEQA Guidelines Section 15123.
- **Section 3.0, Environmental Analysis**, provides an analysis of potential direct, indirect, and cumulatively considerable impacts that may occur with implementation of the proposed Project. A conclusion concerning significance is reached for each discussion; mitigation measures are presented as warranted. The environmental changes identified in Section 4.0 and throughout this DREIR are referred to as "effects" or "impacts" interchangeably. The CEQA Guidelines also identify the terms "effects" and "impacts" as being synonymous (CEQA Guidelines Section 15358). In the environmental analysis subsections of Section 3.0, the existing and historical baseline conditions are disclosed that are pertinent to the subject area being analyzed, accompanied by a specific analysis of physical impacts that may be caused by implementation of the proposed Project. The analyses are based in part upon technical reports that are appended to this DREIR. Information also is drawn from other sources of analytical materials that directly or indirectly relate to the proposed Project and cited in Section 6.0, References. Where the analysis demonstrates that a physical adverse environmental effect may or would occur without undue speculation after compliance with mandatory federal, State, and local laws and regulations, feasible mitigation measures are recommended to reduce or avoid the significant effect. In most cases, mandatory compliance with regulatory requirements and/or the implementation of the identified mitigation measures would reduce the Project's adverse environmental impacts to below a level of significance. If mitigation measures are not available or feasible to reduce an identified impact to below a level of significance, the environmental effect is identified as a significant and unavoidable adverse impact, for which a statement of overriding considerations would need to be adopted by the County of San Bernardino pursuant to CEQA Guidelines Section 15093.

Section 3.0 is organized by ten issue areas (3.A through 3.J) with each following the framework:

- **Environmental Setting**. Describes the environmental setting, including descriptions of the Project site's physical conditions and surrounding context. The existing setting is defined as the condition of the Project site and surrounding area at the approximate date this DREIR's NOP was released for public review on April 21, 2017.
- **Regulatory Framework**. Provides a summary of the federal, State, and local environmental laws and regulations relevant to the specific environmental issue.



- **Impact Analysis.** The County of San Bernardino has not established local CEQA significance thresholds as described in CEQA Guidelines Section 15064.7. For this reason, this DREIR relies on the CEQA checklist included in Appendix G of the State CEQA Guidelines to determine the threshold framework.
- **Thresholds of Significance.** As required by CEQA Guidelines Section 15126.2(a), this DREIR identifies direct, indirect, cumulative, short-term, long-term, on-site, and/or off-site impacts of the proposed Project. A summarized “impact statement” is provided in each subsection following the analysis. The following terms are used in this DREIR to describe the level of significance related to the physical conditions within the area affected by the proposed Project:
 - **Less-than-Significant Impact:** An adverse change in the physical environment would occur but the change would not be substantial or potentially substantial and would not exceed the threshold(s) of significance presented in this DREIR.
 - **Potentially Significant Impact:** A substantial or potentially substantial adverse change in the physical environment would occur and would exceed the threshold(s) of significance presented in this DREIR, requiring the consideration of mitigation measures.
 - **Significant and Unavoidable Impact:** A substantial adverse change in the physical environment would occur and would exceed the threshold(s) of significance presented in this DREIR that cannot be feasibly mitigated to less-than-significant levels.
 - **Cumulative Impacts.** CEQA requires that an EIR contain an assessment of the cumulative impacts that may be associated with a proposed project. As noted in CEQA Guidelines Section 15130(a), “an EIR shall discuss cumulative impacts of a project when the project’s incremental effect is cumulatively considerable.” “A cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects creating related impacts” (CEQA Guidelines Section 15130(a)(1)).
- **Section 4.0, Additional Topics Required by CEQA,** includes specific topics that are required by CEQA. These include a summary of the Project’s significant and unavoidable environmental effects, a discussion of the significant environmental effects which cannot be avoided if the Project is implemented, significant environmental changes, potential growth-inducing impacts of the proposed Project, as well as an evaluation of the Project’s energy conservation and consumption.
- **Section 5.0, Project Alternatives,** describes and evaluates alternatives to the proposed Project that could reduce or avoid the Project’s adverse environmental effects. CEQA does not require an EIR to consider every conceivable alternative to the Project but rather to consider a reasonable range of alternatives that will foster informed decision making and public participation. Two (2) alternatives in addition to the No Project Alternative are presented in Section 5.0.
- **Section 6.0, References,** cites all reference sources used in preparing this DREIR.



- **Section 7.0, List of Preparers**, lists the persons who authored or participated in preparing this DREIR, including agencies and persons consulted.
- **Technical Appendices**. CEQA Guidelines Section 15147 states that the “information contained in an EIR shall include summarized...information sufficient to permit full assessment of significant environmental impacts by reviewing agencies and members of the public,” and that the “placement of highly technical and specialized analysis and data in the body of an EIR shall be avoided.” Therefore, the detailed technical studies, reports, and supporting documentation that were used in preparing this DREIR are bound separately as Technical Appendices. The Technical Appendices are available for review at the County of San Bernardino Planning Department, 385 North Arrowhead Avenue, San Bernardino, CA 92415, during the County’s regular business hours or can be requested in electronic form by contacting the County’s Planning Department. The individual technical studies, reports, and supporting documentation that comprise the Technical Appendices are as follows:

Appendix A:	Notice of Preparation and Initial Study, Notice of Preparation Comments, Previous Staff Report, and Additional Comments
Appendix B:	Air Quality and Greenhouse Gas Analysis
Appendix C:	Habitat Assessment
Appendix D1:	Geotechnical Update Report
Appendix D2:	Earthwork Analysis Report
Appendix E1:	Evacuation Plan
Appendix E2:	Fuel Modification Plan
Appendix F:	Drainage Study
Appendix G:	Noise Study
Appendix H:	Traffic Impact Analysis

1.6 REVISED CEQA GUIDELINES

In November 2018, the California Natural Resources Agency finalized updates to the State CEQA Guidelines. The changes were approved by the Office of Administrative Law on December 28, 2018, and became effective a few weeks before this DREIR was released for public review. The revisions to the CEQA Guidelines implemented legislative changes, clarified rules that govern the CEQA procedural process, and limited duplicative analysis. The revisions also resulted in some reorganization of the environmental checklist suggested by CEQA Guidelines Appendix G, which forms the basis for organization of the environmental analyses presented in this DREIR.

Prior to release of this DREIR for public review, the substantive content of the revised CEQA Guidelines was reviewed to ensure that this DREIR complies with the revised CEQA Guidelines. Of note, Appendix G of the revised CEQA Guidelines suggests presenting an analysis of Wildfire and Energy as independent analysis sections, whereas this DREIR covers these topics, but not independently. Regardless of format and location of analyses in the DREIR, the substantive content required by the CEQA Guidelines as revised is included herein. The location of the environmental analyses associated with certain topics addressed by the CEQA Guidelines revisions is provided below, for reference.



Environmental Topic	Location in this DREIR
Wildfire	Subsection 3.E.6
Energy	Subsection 5.3
Water Supply	Subsection 3.F.6.1

1.7 CUMULATIVE SCENARIO

Cumulative impacts refer to the combined effect of the Project's impacts with the impacts of other past, present and reasonably foreseeable future projects. As established in CEQA Guidelines Section 15130(b)(2), the discussion of cumulative impacts should include the severity of the total impacts of the proposed Project, as well as the likelihood of those impacts to occur. The discussion of cumulative impacts should not be as extensive as impacts that will be generated as a result of the proposed Project, but the discussion should be guided by the standards of practicality and reasonableness. As stated in *Public Resources Code* Section 21083(b), "a project may have a significant effect on the environment if the possible effects of a project are individually limited but cumulatively considerable."

According to CEQA Guidelines Section 15355:

Cumulative impacts refer to two or more individual effects which, when considered together, can be substantial enough to increase other environmental impacts.

- a. The individual effects may be changes resulting from a single project or a number of separate projects.
- b. 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 future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

Further, according to CEQA Guidelines Section 15130(a)(1), an EIR should not discuss impacts which are not a result of the proposed Project.

Additionally, in the CEQA Guidelines, Section 15064(h)(4) substantial cumulative impacts caused by other projects should not be used to justify that the proposed Project will have significant cumulative impacts.

Therefore, the cumulative discussion in an EIR focuses on whether the impacts of the Project under review are cumulatively considerable within the context of impacts caused by other past, present, or foreseeable future projects. Cumulative impact discussions for each issue area are provided in the technical analysis sections contained within Section 3.0 of the DREIR.



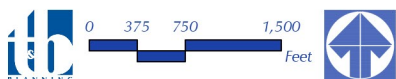
As previously stated, and as set forth in Section 15355(b) of the CEQA Guidelines, related projects consist of, “closely related past, present, and reasonable foreseeable probable future projects that would likely result in similar impacts and are located in the same geographic area.” Specific projects proposed or currently under development in the Lake Arrowhead community were identified with input from the County of San Bernardino. These related projects are shown on Figure 1-1, *Related Projects Location Map* and listed in Table 1-2, *Cumulative Development Land Use Summary* and were generally evaluated for cumulative aesthetics, air quality, biological resources, geology and soils, hazards, hydrology and water supply, and land use impacts. It should be noted that the related projects considered in the noise and traffic analysis to determine cumulative operation impacts were based on the Eagle Ridge Estates T. T. Map 15612 (Related Project No. 3) and an ambient growth rate, which is based on regional growth projections, including the other related projects listed in Table 1-2. Cumulative construction and operation impacts for air quality are based on conditions within the South Coast Air Basin and consistency with forecasted regional growth for San Bernardino County.

It is noted that cumulative impacts analyzed in this DREIR (impacts from related projects in conjunction with the proposed Project) would likely represent a “worst-case” scenario for the following reasons:

- Not all of the related projects will be approved and/or built. Further, it is also likely that certain related projects will not be constructed or opened until after the proposed Project would be built and occupied.
- Impact projections for related projects would likely be, or have been, subject to unspecified mitigation measures which have not been accounted for and would reduce potential impacts.



Figure 1-1



RELATED PROJECTS LOCATION MAP



Table 1-2 Cumulative Development Land Use Summary

#	Project/Location	Land Use	Quantity	Units
1	Santa's Village; east of Kuffel Canyon Road; north of SR-18	Theme Park	--	--
2	Single-Family Residential; southwest corner of Cumberland Drive and SR-173	Single Family Detached Housing	60	DU
3	Arrowhead Pine Rose Cabins; north of SR-189, west of Grandview Road	Cabin/Resort	--	--
4	Landscape Material Sales; 650 ft. north of SR-173 and Hook Creek Road	Nursery	1	AC
5	Retail; 550 ft. east of SR-18 and Kuffel Canyon Road	Shopping Center	4.684	TSF
6	Chapel; southeast corner of Clubhouse Drive and Lovers Lane	Church	1.995	TSF
7	Miniature Golf	Miniature Golf Course	9	Holes
8	Office Building; 26232 SR-18, Rimforest, CA	General Office Building	5	TSF
9	Boat Sales; 29163 Hook Creek Road, Cedar Glen, CA	Recreational Vehicle Sales	2.232	TSF
10	Cabins	Single Family Detached Housing	4	DU
11	Single-Family Residential	Single Family Detached Housing	1	DU

DU: Dwelling Units

TSF: Thousand Square Feet

Source: (Translutions, Inc., 2018, Table C)



1.8 AVAILABILITY OF THE DREIR

This DREIR for the Project is being distributed for comment. The DREIR is also available for review at the following locations:

- San Bernardino County Office at 385 North Arrowhead Avenue (First Floor), San Bernardino, California.
- San Bernardino County, Twin Peaks Office at 26010 State Highway 189, Twin Peaks, California.
- Lake Arrowhead Library at 27235 Highway 189, Bluejay, California.
- Running Springs Library at 2677 Whispering Pines, Running Springs, California.
- Crestline Library at 24105 Lake Gregory Drive, Crestline, California.

Written comments regarding this DREIR should be addressed to:

Heidi Duron, Planning Director
County of San Bernardino
Land Use Services Department
Planning Division
385 N. Arrowhead Avenue, 1st Floor
San Bernardino, CA 92415
Phone: (909) 387-8311
Email: heidi.duron@lus.sbcounty.gov

Tom Nieves, Planner
County of San Bernardino
Land Use Services Department
Planning Division
385 N. Arrowhead Avenue, 1st Floor
San Bernardino, CA 92415
Phone: (909) 387-5036
Email: Tom.Nieves@lus.sbcounty.gov

The County will accept public input on the Project and DREIR before making a recommendation to the County's Board of Supervisors. Comments from the community are welcome and interested parties are encouraged to attend public hearings before the Planning Commission and the Board of Supervisors. Information concerning the public review schedule for the DREIR and public meetings can be obtained by contacting either Heidi Duron, Planning Director, at the San Bernardino County Land Use Services Department by e-mail at heidi.duron@lus.sbcounty.gov or Tom Nieves, Planner, at the San Bernardino County Land Use Services Department by email at Tom.Nieves@lus.sbcounty.gov. Upon completion of the formal public review period, written responses to all comments on environmental issues will be prepared and incorporated into the Final Revised EIR.



2.0 PROJECT DESCRIPTION

This Section 2.0 is provided pursuant to CEQA Guidelines Section 15125(a), and includes a description of the Project site's physical environmental conditions as they existed in April 2017 when the Project Applicant submitted a revised Conditional Use Permit (CUP) application to the County and the preparation of this Draft Revised Environmental Impact Report (DREIR) commenced. This Section addresses existing conditions from local and regional perspectives and provides a brief overview of the environmental resources located on and surrounding the Project site. Additional detail regarding existing conditions for specific subject areas (e.g., biology, geology, etc.) is provided within the subsections of Section 3.0, *Environmental Analysis*, of this DREIR.

Additionally, this Section provides all of the information required of an EIR Project Description by CEQA Guidelines Section 15124, including a description of the Project's precise location and boundaries; a statement of the Project's objectives; a description of the Project's technical, economic, and environmental characteristics; and a description of the intended uses of this DREIR including a list of the government agencies that are expected to use this DREIR in their decision-making processes; a list of the permits and approvals that are required to implement the Project; and a list of related environmental review and consultation requirements.

2.1 ENVIRONMENTAL SETTING

Pursuant to CEQA Guidelines Section 15125 (as revised in December 2018), the baseline environmental conditions for purposes of establishing the setting of an EIR is generally the environment as it existed at the time the EIR's Notice of Preparation (NOP) was circulated for public review. However, the CEQA Guidelines Section 15125 allow for the time that environmental analysis is commenced to be used as the baseline for environmental conditions when necessary to provide the most accurate picture practically possible of the project's impacts when supported by substantial evidence. The NOP for the previously-proposed Project's 2010 Draft EIR was released for public review on March 11, 2005. However, due to the length of time that passed between the publication of the NOP and the time that this DREIR commenced preparation, the County of San Bernardino determined that for purposes of analysis in this DREIR, it is more appropriate that this DREIR regard the baseline environmental conditions as those that existed at the Project site and in its vicinity in April 2017 when the Project Applicant submitted a revised CUP application to the County and the preparation of this DREIR commenced.

Additionally, the Rimforest Storm Drain Project Final EIR (SCH No. 2015051070) was published on March 2017 and certified by the County of San Bernardino on May 23, 2017. As part of the Rimforest Storm Drain project, the County of San Bernardino purchased approximately 10.0 acres of land that were previously included within the Project site for the purpose of installing drainage facilities that, when constructed, will address erosion and land sliding in the southern Rimforest community. Thus, the 10.0 acres previously included in the Project site (as described in the 2010 Draft EIR), and that are now associated with the Rimforest Storm Drain project, are no longer part of the Project site that is evaluated in this DREIR. No legal challenges were filed on the Rimforest Storm Drain Project Final EIR; thus, its Mitigation Monitoring and Reporting Program (MMRP) is adopted, legally binding, and expected to be implemented as described. The Rimforest Storm Drain Project Final EIR is herein incorporated by reference pursuant to CEQA Guidelines Section 15150



and is available for public review at the physical location and website referenced in DREIR Section 6.0, *References*.

For the reasons described above, deviation from the use of the March 2005 NOP date to a more recent date of April 2017 to establish the environmental baseline for purposes of evaluation in this DREIR is appropriate in order to present a fair and accurate description of the Project's expected environmental impacts. The Project has been designed to be constructed either prior to or following the implementation of the Rimforest Storm Drain project; thus, this DREIR evaluates both scenarios. In areas where implementation of the Rimforest Storm Drain project will physically impact the Project site (approximately 0.10 acres as documented in the Rimforest Storm Drain Project Final EIR; SCH No. 2015051070), this DREIR bases its impact assessments to those 0.10 acres on conditions that occur both with and without the implementation of the Rimforest Storm Drain project.

As required by CEQA Guidelines Section 15125(c), the environmental setting should identify any inconsistencies between a proposed project and applicable general, specific, or regional plans, and place special emphasis on resources that are rare or unique to that region and would be affected by the Project. Refer to Subsection 2.1.5, *Planning Context*, for additional information about applicable plans. Regarding rare and unique resources, the Project site is located in the forested mountain community of Rimforest. Biological resources located on the Project site are not rare or unique to the Project site because the surrounding area also contains these resources. This DREIR acknowledges that several plant and animal species identified on the Project site and that occur in the surrounding area are documented by the United States Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), and/or United States Forest Service (USFS) as endangered, threatened, or sensitive. Refer to Subsection 3.C, *Biological Resources*, for additional information.

2.1.1 REGIONAL SETTING AND LOCATION

The Project is proposed to be developed on an approximately 27.12-acre property located in the Rimforest community, an unincorporated area of San Bernardino County located in the San Bernardino Mountains. As shown on Figure 2-1, *Regional Map*, the Project site is located immediately north of State Route 18 (SR-18), approximately 0.5 mile south of State Route 189 (SR-189), and approximately 1.2 miles west of State Route 173 (SR-173). The City of San Bernardino is located approximately 4.5 miles to the south of the Project site. The Project site is located approximately 1.5 miles to the southwest of the Lake Arrowhead reservoir.

2.1.2 LOCAL SETTING AND LOCATION

As depicted on Figure 2-2, *Vicinity Map*, the Project site is located in the northeast portion of the unincorporated community of Rimforest in the western portion of unincorporated San Bernardino County, California. The Project site is located within the San Bernardino National Forest, a United States National Forest that encompasses about 823,816 acres of portions of the San Bernardino Mountains, San Jacinto Mountains, and Santa Rosa Mountains. Approximately 82% of the San Bernardino National Forest is federally-owned. The Project site is privately-owned and is located in the San Bernardino Mountains portion of the San Bernardino National Forest, situated immediately north of SR-18, east of Bear Springs Road, and west of Daley Canyon Road. The Project site lies within Section 29, Township 2 North, Range 3 West,



Harrison Mountain Quadrangle. The Project site encompasses the Assessor's Parcel Number (APN) 336-101-15.

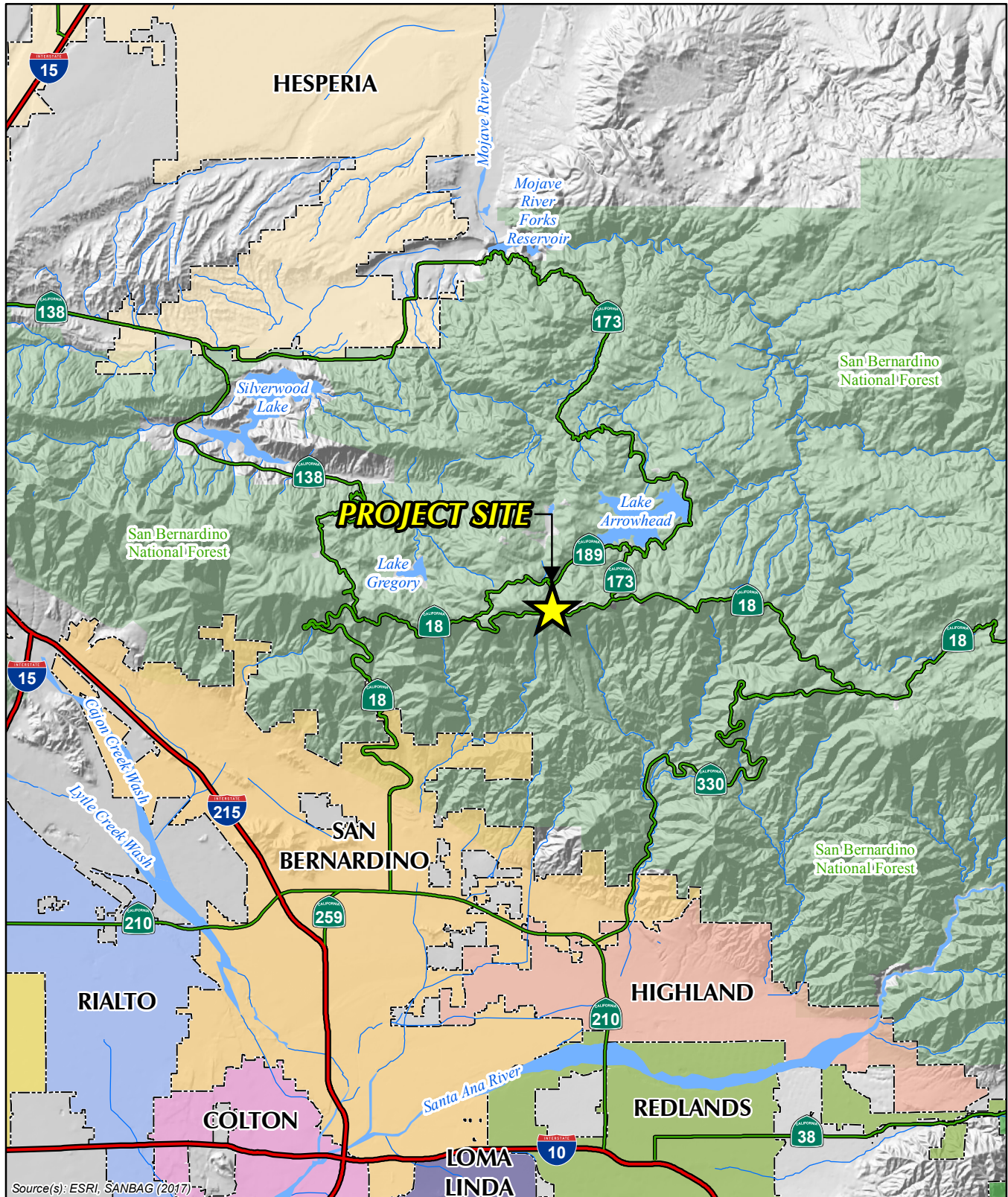
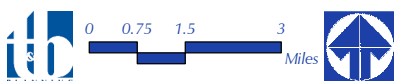


Figure 2-1



REGIONAL MAP

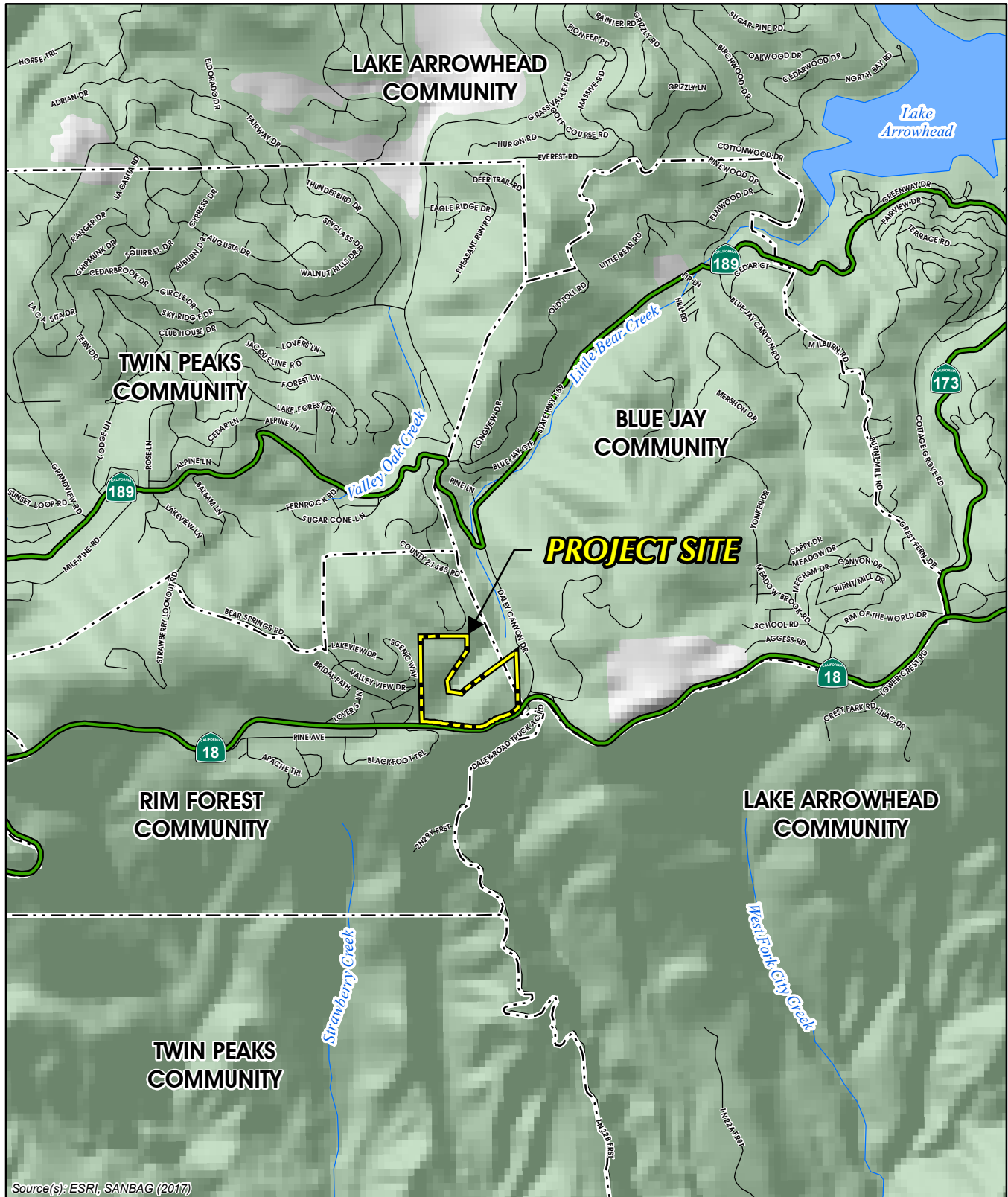
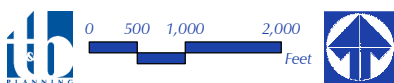


Figure 2-2



VICINITY MAP



2.1.3 SURROUNDING LAND USES AND DEVELOPMENT

Land uses surrounding the Project site are depicted on Figure 2-3, *Surrounding Land Uses and Development*, and described below.

North: The Project site is bordered to the north by undeveloped mountainous terrain, with a Caltrans maintenance facility and single-family residences located approximately 0.5 mile and 0.2 mile farther north, respectively.

East: The Project site is bordered on the east by Daley Canyon Road. The Dogwood Campground (a public campground within the San Bernardino National Forest) and Rim of the World High School (part of the Rim of the World Unified School District) are located to the east of Daley Canyon Road approximately 0.1 mile and 0.2 mile to the east of the Project site, respectively.

South: The Project site is bordered on the south by SR-18 with steeply sloped undeveloped mountainous terrain located beyond SR-18. Commercial and residential development are located to the southwest of the Project site, south of SR-18.

West: The Project site is bordered on the west by single-family residences associated with the Rimforest community.

2.1.4 EXISTING PHYSICAL SITE CONDITIONS

The Project site is undeveloped and is characterized by gently rolling hills to steep mountain terrain that is largely covered by montane coniferous forest. The Project site includes a northeasterly trending valley that runs along the center of the Project site and falls to the northeast. Elevations across the Project site range from approximately 5,400 feet above mean sea level (amsl) at the northeast corner of the Project site to 5,740 feet amsl on the western edge of the Project site. A natural drainage course traverses the south-central portion of the Project site that is planned to be controlled in a pipe in the future as part of the County of San Bernardino Department of Public Works' Rimforest Storm Drain Project. In the existing condition, an 8-inch subsurface sewer line traverses the Project site parallel to the existing drainage course. An abandoned groundwater well also exists on the southwest portion of the Project site.

2.1.5 PLANNING CONTEXT

This subsection provides a description of the Project site's land use and zoning designations, as well as a description of the regional planning authorities and documents that are applicable to the Project.

A. Southern California Association of Governments (SCAG)

The Southern California Association of Governments (SCAG) is responsible for regional planning in Southern California. SCAG provides a framework to coordinate local and regional decisions regarding future growth and development and prepares future growth forecasts for the region. As the designated Metropolitan Planning Organization (MPO) for the area, SCAG is mandated by the federal government to research and develop plans for transportation, growth management, hazardous waste management, and air quality, based

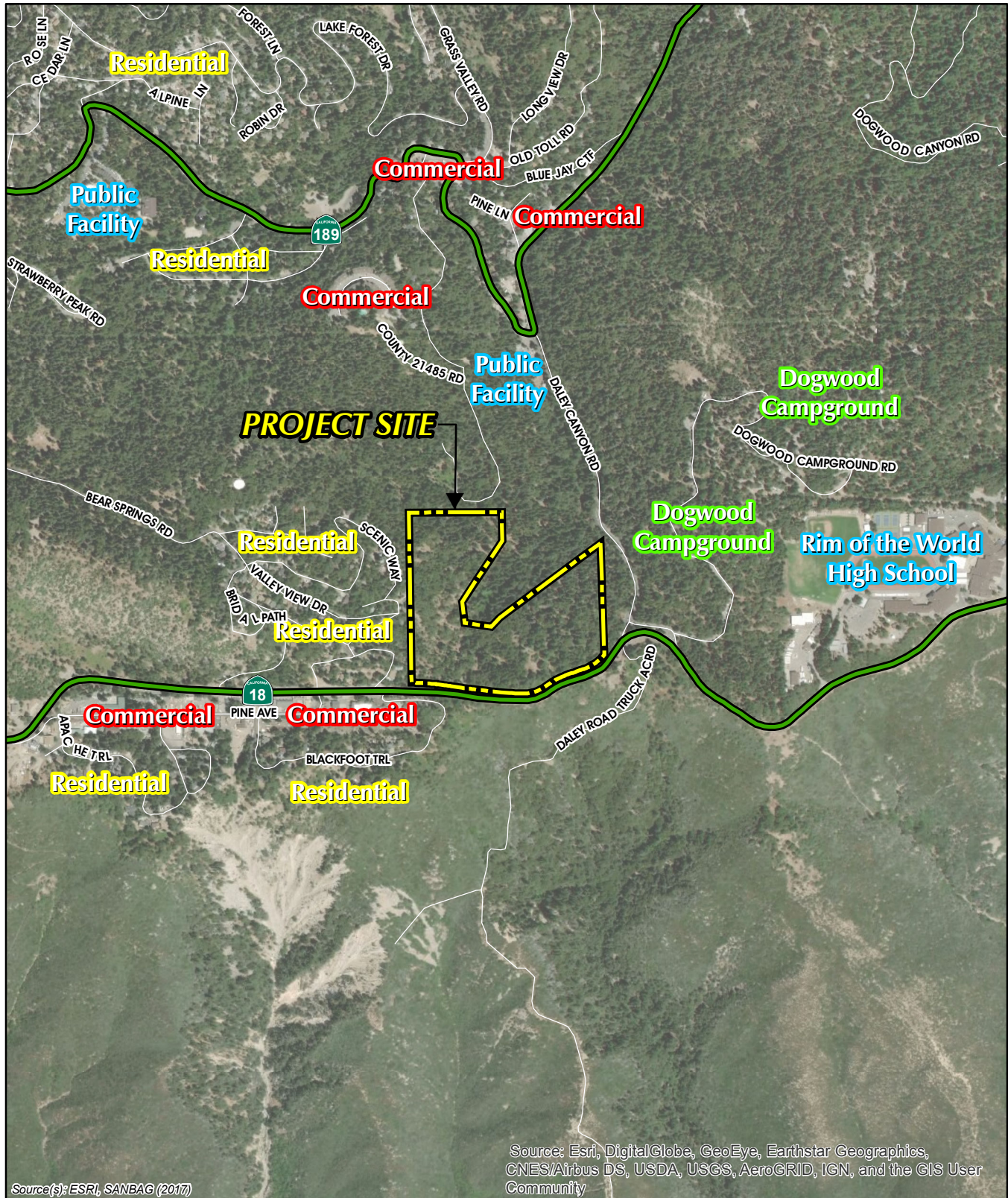
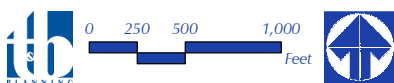


Figure 2-3



SURROUNDING LAND USES AND DEVELOPMENT



on the regional growth projections. The sub-regional council for San Bernardino County is the San Bernardino County Transportation Authority (SBCTA).

On April 7, 2016, SCAG adopted the 2016-2040 Regional Transportation Plan (RTP)/Sustainable Communities Strategy (SCS) with goals to: 1) align the plan investments and policies with improving regional economic development and competitiveness; 2) maximize mobility and accessibility for all people and goods in the region; 3) Ensure travel safety and reliability for all people and goods in the region; 4) preserve and ensure a sustainable regional transportation system; 5) maximize the productivity of our transportation system; 6) protect the environment and health of our residents by improving air quality and encouraging active transportation (e.g., bicycling and walking); 7) actively encourage and create incentives for energy efficiency, where possible; 8) encourage land use and growth patterns that facilitate transit and active transportation; and 9) maximize the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies. The RTP/SCS includes performance measures and funding strategies to ensure that the adopted goals are achieved during implementation.

B. San Bernardino County General Plan

The Project site is located within the Mountain Planning Region of the San Bernardino County General Plan. The Mountain Planning Region consists of the portions of the San Bernardino and San Gabriel mountain ranges that are within San Bernardino County boundaries. The Mountain Planning Region encompasses approximately 872 square miles, the majority of which (715 square miles) is comprised of public lands that are managed by State and federal agencies, principally the USFS (San Bernardino County, 2012, p. 1-16). The Project site is located within the Lake Arrowhead Community Planning Area, which is a community plan area that encompasses 30 square miles and includes the communities of Agua Fria, Blue Jay, Cedar Glen, Crest Park-Meadowbrook Woods, Deer Lodge Park, Lake Arrowhead, Rimforest, Skyforest and Twin Peaks (San Bernardino County, 2007, pp. 7-9).

As depicted on Figure 2-4, *Existing General Plan Land Use/Zoning Designations*, the San Bernardino County General Plan Land Use Zoning District applicable to the Project site is “Lake Arrowhead/Community Industrial (LA/IC)” (San Bernardino County, 2010). At the time the NOP for this DREIR was released (April 2005), the County of San Bernardino was considering to update the General Plan for the County. During this time, the 2007 General Plan was the approved and applicable General Plan for the County. Therefore, because the County did not approve a new General Plan during the time this DREIR was drafted, the 2007 San Bernardino County General Plan was used as the baseline environmental setting for this DREIR.

C. San Bernardino County Development Code (Title 8 of the San Bernardino County Code)

The primary purpose of Title 8, *Development Code*, of the San Bernardino County Code is to implement the San Bernardino General Plan by classifying and regulating the uses of land and structures within unincorporated San Bernardino County. The Development Code is a regulatory document that establishes specific standards for the use and development of all properties within unincorporated San Bernardino County. The Development Code regulates development intensity using a variety of methods, such as setting limits on building setbacks, landscaping standards, and building heights. (San Bernardino County, 2018)

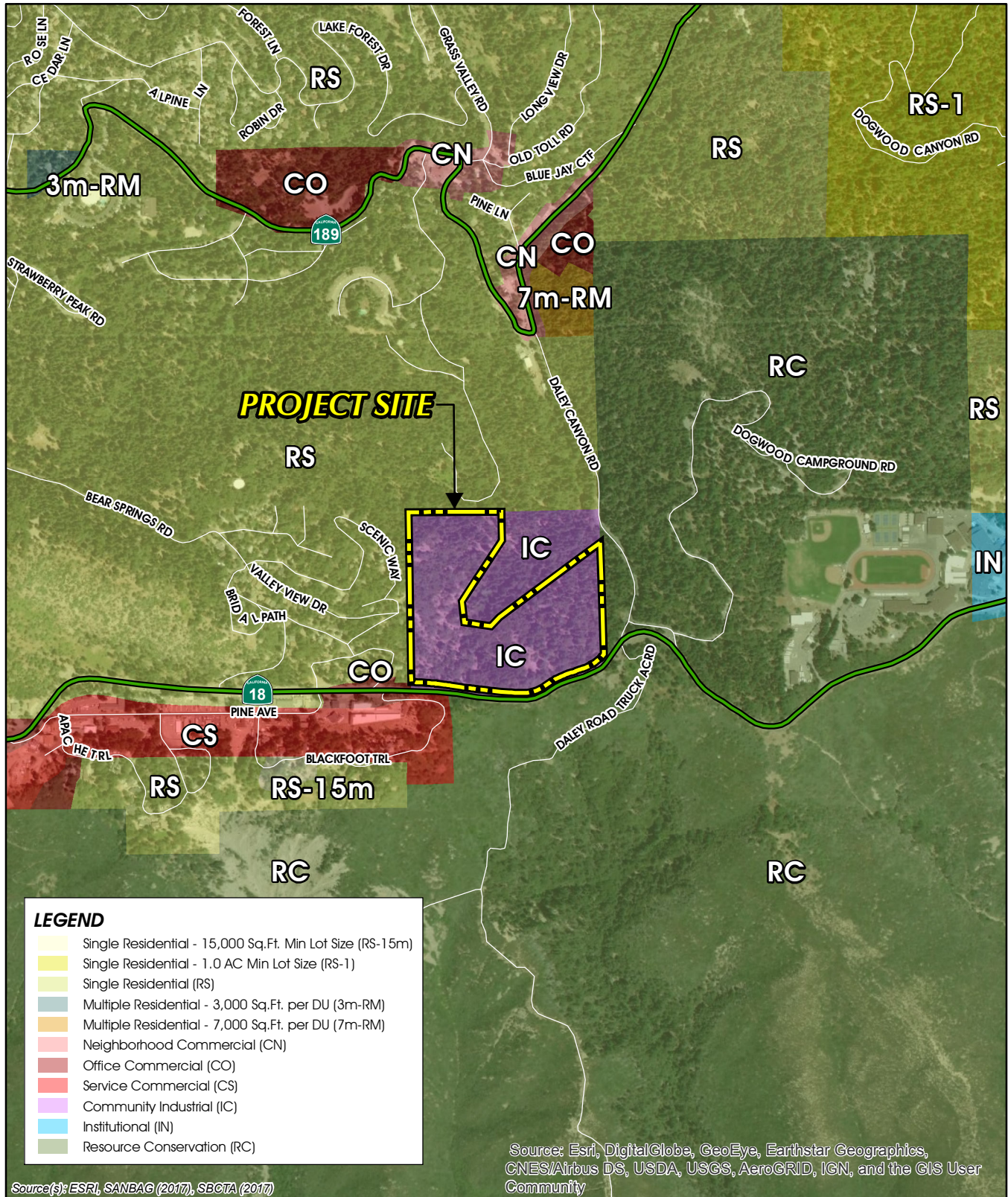


Figure 2-4



0 250 500 1,000
feet



EXISTING GENERAL PLAN LAND USE/ZONING DESIGNATIONS



2.1.6 LAND USE

The Project site is currently undeveloped and vacant, with the exception of an 8-inch sewer line that generally runs parallel to the on-site natural drainage course.

2.1.7 AESTHETICS AND TOPOGRAPHIC FEATURES

As shown on Figure 2-5, *Aerial Photograph*, the Project site is currently undeveloped and is characterized by gently rolling hills to steep mountain terrain primarily covered by montane coniferous forest. As shown on Figure 2-6, *USGS Topographic Map*, elevations across the Project site vary from approximately 5,400 feet amsl on the northeast corner of the Project site to approximately 5,740 feet amsl on the western portion of the Project site. A natural drainage traverses the south-central portion of the Project site.

2.1.8 AIR QUALITY

The Project site is located in the 6,745-square-mile South Coast Air Basin (SCAB), which includes portions of Los Angeles, Riverside, and San Bernardino Counties, and all of Orange County. The SCAB is bound by the Pacific Ocean to the west and the San Gabriel, San Bernardino, the San Jacinto Mountains to the north and east, and San Diego County to the south. The SCAB is within the jurisdiction of the South Coast Air Quality Management District (SCAQMD), the agency charged with bringing air quality in the SCAB into conformity with federal and state air quality standards. As documented in the Project's Air Quality Impact Analysis (*Technical Appendix B* to this DREIR), although the climate of the SCAB is characterized as semi-arid, the air near the land surface is quite moist on most days because of the presence of a marine layer. More than 90% of the SCAB's rainfall occurs from November through April. Temperatures during the year range from an average minimum of 36°F in January to over 100°F maximum in the summer. During the late autumn to early spring rainy season, the SCAB is subjected to wind flows associated with the traveling storms moving through the region from the northwest. This period also brings five to ten periods of strong, dry offshore winds, locally termed "Santa Ana[s]" each year.

Although air quality in the SCAB has improved over the past several decades, according to the SCAQMD, the SCAB currently does not meet the state criteria for ozone, particulate matter less than 2.5 microns (PM_{2.5}), and particulate matter less than 10 microns (PM₁₀). Additionally, the SCAB does not meet the federal criteria for ozone (8-hour standard) and particulate matter less than 10 microns (PM₁₀). (CARB, 2016)

Refer to DREIR Subsections 3.B, *Air Quality*, and 3.J, *Greenhouse Gas Emissions*, for a detailed discussion of the Project site's existing air quality and climatic setting.

2.1.9 GEOLOGIC SETTING

Regionally, the Project site is located within the San Bernardino Mountains, which are situated within the Transverse Ranges geomorphic province in southern California. The Transverse Ranges are easterly trending mountains and geologic structures that extend in an east-west direction from the little San Bernardino Mountains to the Channel Islands. The geologic composition of the San Bernardino Mountains primarily consists of igneous intrusive rocks and older metamorphic rocks of gneiss. (LOR, 2001, p. 7)

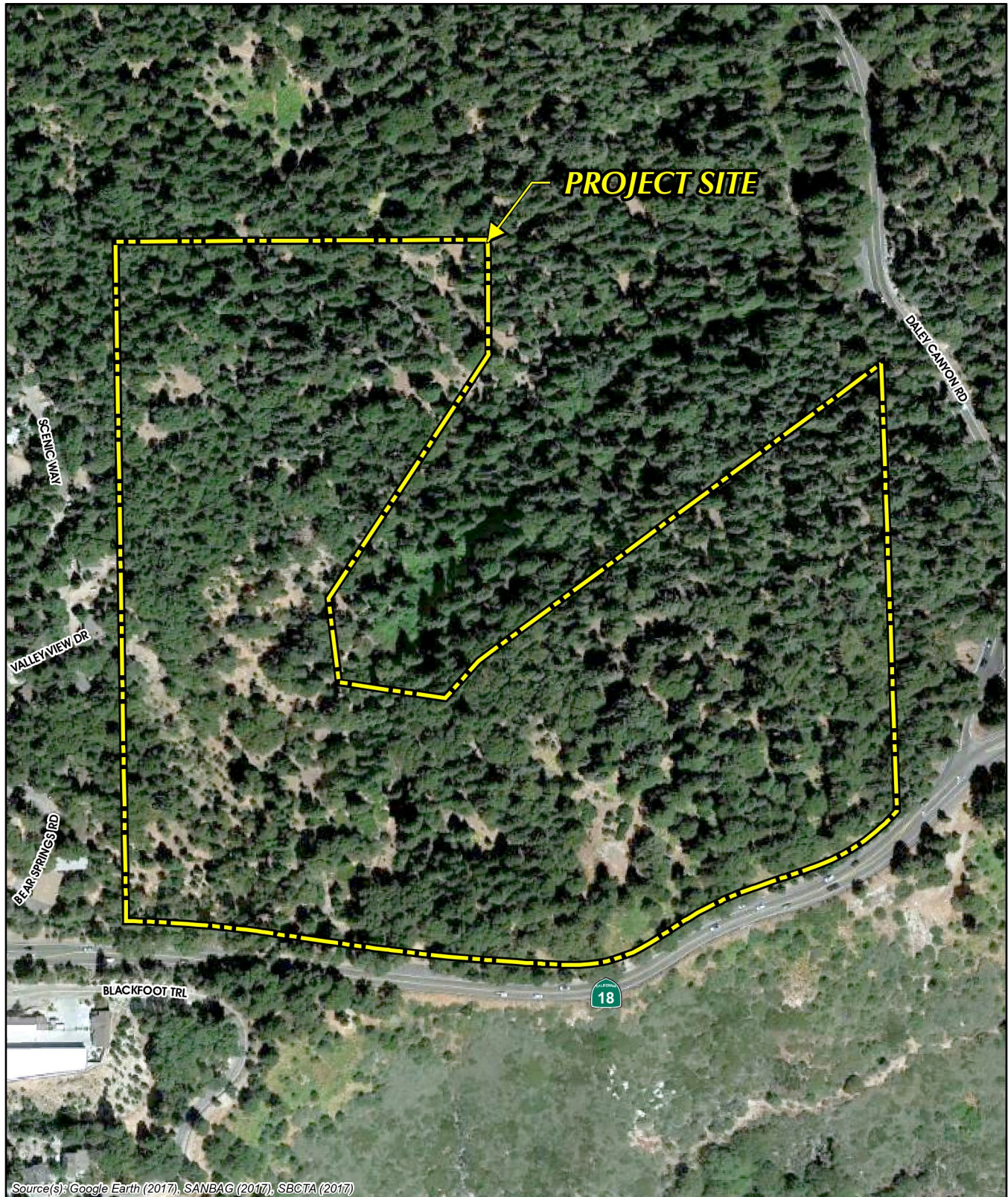
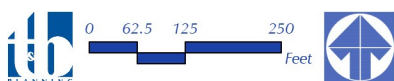


Figure 2-5



AERIAL PHOTOGRAPH



- NOTES:
1. RECORD OWNER: CHURCH OF THE WOODS, A CALIFORNIA CORPORATION; P.O. BOX 2000; LAKE ARROWHEAD, CA; 92352; 909-337-5483.
 2. PUBLIC UTILITIES ARE AS FOLLOWS:
 - A) WATER: CRESTLINE LAKE ARROWHEAD WATER AGENCY; P.O. BOX 3880; CRESTLINE, CA 92325; 909-338-1775
 - B) SEWER: LAKE ARROWHEAD COMMUNITY SERVICES DIST; P. O. BOX 789; LAKE ARROWHEAD, CA 92352; 909-337-8555
 - C) NATURAL GAS: SO. CAL. GAS CO.; P. O. BOX 6226; SAN BERNARDINO, CA; 909-889-9711
 - D) ELECTRIC: SO. CAL. EDISON CO.; P. O. BOX 96; RIM FOREST, CA; 92378; 909-337-2564
 - E) TELEPHONE: VERIZON; 1500 CRAFTON AVE.; MENTONE, CA; 92359; 909-793-7441
 - F) CABLE TV: FALCON CABLE; P. O. BOX 9; RIM FOREST, CA; 92378; 909-336-2457
 3. THE CURRENT AND PROPOSED GENERAL PLAN USE DISTRICT IS LA/IC.
 4. ENTRY SIGNS WILL BE SUBMITTED FOR REVIEW AT A LATER DATE.
 5. ALL PARKING AREAS WILL BE SURFACED WITH ASPHALT. THE MINIMUM PARKING SPACE WILL BE 9'x19' TYPICAL.
 6. TREES TO BE REMOVED ARE DISCUSSED IN THE FORESTERS REPORT PREPARED BY JOHN HATCHER DATED 3-25-03.

PROJECT SUMMARY:

BUILDINGS

PHASE 1	
YOUTH CENTER GYMNASIUM.	
FIRST FLOOR	18,305 SF
SECOND FLOOR	8,579 SF
SNACK BAR	480 SF
TOTAL SF:	27,364 SF

PHASE 2	
ASSEMBLY BUILDING - CHILDREN'S MINISTRY	
FIRST FLOOR	27,254 SF
SECOND FLOOR	13,783 SF
TOTAL =	41,037 SF

MAINTENANCE BUILDING & CARETAKERS RESIDENCE	
FIRST FLOOR	750 SF
SECOND FLOOR	750 SF
TOTAL SF=	1,500 SF
TOTAL PH 2=	42,537 SF

PROJECT SUMMARY

BUILDING COVERAGE (FOOTPRINT)	46,309 SF	3.9 %
DRIVEWAYS & PARKING	199,478 SF	16.9 %
CONCRETE WALKS & PATIOS	26,200 SF	2.2 %
SPORTS COURTS	9,508 SF	0.8 %
SPORTS FIELD	54,000 SF	4.6 %
LANDSCAPE AREA	182,960 SF	15.5 %
LANDSCAPE SLOPES	66,133 SF	5.6 %
WATER QUALITY BASIN	7,838 SF	0.6 %
NATURAL AREA	1,013,670 SF	49.9 %
TOTAL PROJECT= (27.12 ACRES)	1,181,363 SF	100.0 %

PARKING SUMMARY (9x19 TYPICAL)

	REQUIRED	PROVIDED
CHURCH OF THE WOODS (BUILD OUT)		
600 SEATS (1 space for 3 seats)	200	311

IMPROVEMENT NOTES:

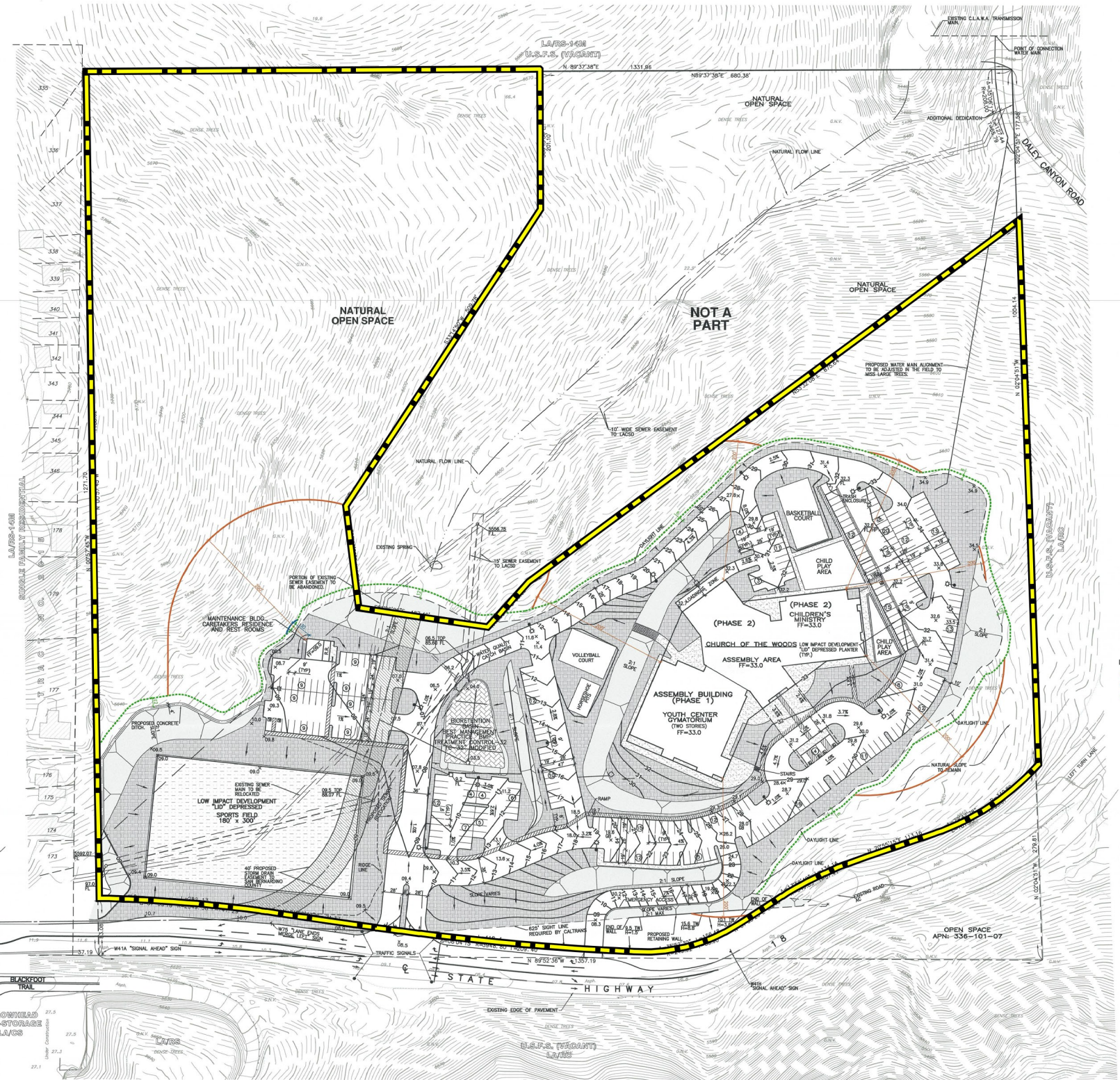
1. DRIVE AISLES AND PARKING SPACES TO BE A.C. PAVEMENT AND BASE PER GEOTECHNICAL ENGINEERING RECOMMENDATIONS.
2. ALL PAVED ACCESS AREAS TO BE BORDERS BY 6" CONCRETE CURBS.
3. SPORTS FIELD AND LANDSCAPE AREAS TO BE DEPRESSED AS PART OF STORM WATER RUNOFF MITIGATION PLAN.
4. SEE WATER QUALITY MANAGEMENT PLAN FOR DETAILS ON MODIFIED BIOTENTION BASIN.
5. BUILDINGS WITHIN CAMPUS ARE CONNECTED BY A.D.A. PATH OF TRAVEL. NO A.D.A. PATH OF TRAVEL IS PROVIDED TO ANY STATE HIGHWAYS BECAUSE PEDESTRIAN TRAFFIC IS NOT ALLOWED WITHIN STATE HIGHWAY RIGHT OF WAY.

LEGEND:

- INDICATES PLAY FIELD
- INDICATES ORNAMENTAL LANDSCAPE
- INDICATES SLOPE
- INDICATES CONCRETE WALKWAY
- INDICATES A.D.A. PATH OF TRAVEL
- INDICATES DIRECTION OF FLOW
- FF INDICATES FINISH FLOOR
- INDICATES FINISH GRADE
- INDICATES EXISTING CONTOURS
- INDICATES PROPOSED CONTOURS
- INDICATES LIGHT POLE

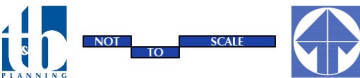
LEGEND

- ZONE 3 FUEL MODIFICATION (80,550.48 SF)
- ZONE 2 FUEL MODIFICATION (85.07 SF)
- DISTURBED AREA GRADING (BUFFER) (19,684.73 SF)



Source(s): McKee Engineering (06-28-2017)

Figure 2-7





A previous Engineering Geology and Soils Engineering Investigation was performed at the Project site in 2001 by LOR Geotechnical Group, Inc., which identified the site as being underlain by granitic bedrock overlain by a thick layer of colluvial and topsoil materials. In the central portion of the Project site, the depth of colluvium was observed to thicken with units of older alluvium overlying the bedrock. Exposed bedrock was observed along the western edge of the Project site, which typically consisted of a medium grained quartz monzonite. Typically, bedrock at the Project site was observed to be covered by several feet of colluvial soils. The majority of the Project site is covered by a thick layer of organic topsoil. (LOR, 2001, pp. 7-8)

The San Bernardino County General Plan Geologic Hazard Overlays Map depicts the Project site as being located within an area subject to moderate to high landslide susceptibility. (San Bernardino County, 2010a)

Refer to DREIR Subsection 3.D, *Geology and Soils*, for a detailed discussion of the geology and soils of the Project site.

2.1.10 HYDROLOGIC SETTING

The Project site is located within the Mojave Watershed, which is located entirely within San Bernardino County and includes approximately 1,600 square miles of total drainage. Approximately 210 square miles of this drainage area are located in the San Bernardino Mountains, which are the headwaters for the Mojave River system. Although the Project site is on the boundary of the Lahontan and Santa Ana Basin Plan boundaries, the Project site is located within the purview of the Santa Ana Regional Water Quality Control Board (RWQCB). The Santa Ana RWQCB's Water Quality Control Plan for the Santa Ana River Basin (Region 8; most recently updated in 2011) is the governing water quality plan for the region which set forth goals and objectives for protecting water quality within the region.

Under existing conditions, the Project site receives off-site storm water flows from the properties to the west via sheet flow, and on-site storm water flows are conveyed to the on-site natural drainage course located on the south-central portion of the Project site. On-site flows contained within the natural drainage course exit the Project site at the northeast corner. The natural drainage course continues in a northerly direction along Daley Canyon Road. Flows within the natural drainage course that traverses the Project site are tributary to the headwaters of Little Bear Creek, which flows approximately 1.5 miles to discharge to the Lake Arrowhead reservoir.

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) Nos. 06071C7955H, effective on 08/28/2008, the Project site is not located within a special flood hazard area subject to inundation by the 1% annual flood (100-year flood). The entirety of the Project site is located within FEMA Flood Zone D, which correlates with areas in which flood hazards remains undetermined.

Under existing conditions, an abandoned groundwater well owned by the Big Bear Municipal Water District (BBMWD) is present on the southwest portion of the Project site.

Refer to DREIR Subsection 3.F, *Hydrology and Water Quality*, for a detailed discussion of the Project site's hydrological setting.



2.1.11 NOISE SETTING

The background ambient noise levels in the Project study area are dominated by vehicle noise from SR-18, Bear Springs Road, and Daley Canyon Road. A previously prepared acoustical study, conducted by LSA Associates, Inc., collected 24-hour noise measurements at two (2) locations in the Project area from September 15, 2005 to September 16, 2005. Measured hourly noise levels in the study area ranged from 35.0 equivalent level decibels (dBA L_{eq}) to 50.2 dBA L_{eq} . Although the existing noise levels were measured in 2005, the Project site, surrounding area, and existing traffic volumes have not substantially changed since 2005. As such, the noise levels measured in 2005 are still applicable. (HDR, 2018, p. 11)

Refer to DREIR Subsection 3.H, *Noise*, for a detailed discussion of the Project site's acoustical setting.

2.1.12 TRANSPORTATION AND TRAFFIC SETTING

Traffic volumes within the Rimforest area fluctuates with seasonal variations; as such, existing traffic volumes experience an 8.42% increase during peak months. Under existing conditions, all study area intersections are operating at satisfactory levels of service with the exception of the Bear Springs/SR-18 intersection during the Saturday peak hour. Major vehicular travel routes in the region include SR-18, SR-330, and SR-138. Local roads in the Project site's vicinity include Bear Springs Road, SR-189, Lake Gregory Drive, Grass Valley Road, SR-173, and Daley Canyon Road. Existing traffic on nearby roadways include passenger vehicles and public transportation vehicles. Translutions, Inc. indicated that the Project site vicinity does not contain sidewalks or bike lanes. (Translutions, Inc., 2018, pp. 10-15)

Refer to DREIR Subsection 3.I, *Transportation and Circulation*, for a detailed discussion of the Project site's transportation and traffic setting.

2.1.13 UTILITIES AND SERVICES SYSTEMS

Under existing conditions, 10-foot-wide sewer main easement is located on the southwest portion of the Project site and an 8-inch sewer line traverses the Project site in a parallel fashion to the on-site drainage course. Additionally, a groundwater well operated by the BBMWD is located on the southwest corner of the Project site. According to the 2001 Engineering Geology and Soils Engineering Investigation prepared by LOR and performed at the Project site, the groundwater well was abandoned and capped in the 1980s (LOR, 2001, p. 9). The Project site is located near developed areas that include existing water and sewer infrastructure. Water services in the area are provided by Crestline Lake Arrowhead Water Agency (CLAWA). Sewer services in the area are provided by the Lake Arrowhead Community Services District (LACSD). Southern California Gas (So. Cal. Gas) is the natural gas utility provider in the Project area. Electric utilities for the Project area are provided by Southern California Edison (So. Cal. Edison). Verizon is the telephone utility provider in the Project area. Cable utilities in the Project area are provided by Falcon Cable. The County of San Bernardino Solid Waste Management Division (SWMD) is responsible for the operation and management of the County's solid waste disposal system which consists of five (5) regional landfills and nine (9) transfer stations. Solid waste from the Project site would be taken to the Heaps Peak Transfer Station before being loaded into larger trucks and transferred to the Mid-Valley Landfill for disposal. The Heaps Peak Transfer Station is located at 29818 Highway 18 in Running Springs. The Mid-Valley Landfill is located at 2390 Alder Avenue in Rialto. The SWMD authorizes and regulates trash collection by private haulers in unincorporated San Bernardino County.



2.1.14 VEGETATION

The Project site consists of vacant, undeveloped land with naturally occurring plant communities throughout the site. The Project site contains two plant communities: mixed conifer forest and riparian scrub. Approximately 27.02 acres of the 27.12-acre Project site contains the mixed conifer forest and approximately 0.10 acres of the Project site contains the riparian scrub plant community (Element Consulting, 2018, p. 12). The mixed conifer forest is present throughout the Project site and the riparian scrub is found along the on-site natural drainage feature. Under existing conditions, the Project site does not contain any special-status plant species, but the site does contain a low potential to support Palmer's mariposa-lily (*Calochortus palmeri* var. *palmeri*) and lemon lily (*Lilium parryi*).

Refer to DREIR Subsection 3.C, *Biological Resources*, for a detailed discussion of the Project site's plant communities and habitat.

2.1.15 WILDLIFE

The plant communities found on the Project site provide suitable habitat for several wildlife species that are indicative to the San Bernardino Mountains. Under existing conditions, the Project site contains suitable habitat for amphibians, reptiles, birds, and mammals. Although a small portion of the Project site contains a naturally occurring drainage feature, the Project site does not contain habitat that would be suitable for sustaining a fish population. According to the Project-specific Biological Resources report, no special-status wildlife species were observed on the Project site. However, the Project site does contain suitable habitat for several special-status wildlife species, including the southern rubber boa (*Charina bottae umbratica*), San Bernardino flying squirrel (*Glaucomys oregonensis*), and California spotted owl (*Strix occidentalis occidentalis*) (Element Consulting, 2018, p. 19).

Refer to DREIR Subsection 3.C, *Biological Resources*, for a detailed discussion of the Project's wildlife population.

2.2 OVERALL PROJECT CHARACTERISTICS

The Project Applicant proposes to develop a portion of the Project site with the Church of the Woods campus development that would include a two-story building consisting of a 27,364-square foot (sq. ft.) gymnasium and a 41,037-sq. ft. assembly building/children's ministry on the southeast portion of the Project site. Additionally, a 1,500-sq. ft. two-story building that would serve as a maintenance building, caretaker residence, and lavatory facilities would be developed on the southwest portion of the Project site. The Project would also include an ancillary 54,000-sq. ft. sports field, sports courts, and a 7,838-sq. ft. water quality bioretention basin. Additionally, associated on-site drainage facilities, utility connections, landscaped areas, pedestrian pathways, internal circulation roadways, driveways, and parking areas would be constructed. Approximately 13.5 acres (588,937 sq. ft.) of the Project site (approximately 50%) would remain as natural open space.

This DREIR analyzes the physical environmental effects associated with all components of the proposed Project, including planning, construction, and ongoing operation. Implementation of the Project would require discretionary approval of a CUP by the County of San Bernardino.



The Project's CUP application, as submitted to the County of San Bernardino by the Project Applicant, is herein incorporated by reference pursuant to CEQA Guidelines Section 15150 and is available for review at the County of San Bernardino Planning Department, 385 North Arrowhead Avenue, San Bernardino, CA 92415. All other discretionary and administrative approvals that would be required of the County of San Bernardino or other government agencies are also within the scope of the Project analyzed in this DREIR.

2.3 STATEMENT OF OBJECTIVES

The underlying purpose of the proposed Project is to develop a portion of the Project site with the Church of the Woods campus. The following is a list of specific objectives that the proposed Project intends to achieve.

- A. To construct a new church campus that would include worship facilities, a youth center gymnasium, children's ministry, sports courts, and a sports field.
- B. To relieve space constraints and address operational deficiencies at the existing Church of the Woods facilities.
- C. To provide a new Church of the Woods facility that adequately accommodates present and anticipated future congregational needs for worship services, bible study, social gatherings, and recreational activities.
- D. To develop a church campus in a natural setting within the San Bernardino National Forest which provides facilities to accommodate spiritual, educational, and recreational activities.
- E. To develop church facilities where community activities can occur, including meeting rooms, classrooms, and recreational facilities available for use by local public and private organizations.
- F. To develop a church facility in such a manner that approximately 50% of its site is retained as natural open space.
- G. To the extent feasible, develop the Project site in such a manner that is coordinated with the Rimforest Storm Drain project.
- H. To incorporate energy reduction, environmentally sustainable building practices, and water conservation into the Project's design and operational characteristics.

2.4 PROJECT COMPONENTS AND DISCRETIONARY APPROVALS

The proposed Project consists of an application for a CUP, which is described below in Subsection 2.4.1. Approval of the application would allow for development of a portion of the Project site with the proposed Church of the Woods campus development that would include a two-story building consisting of a 27,364-sq. ft. gymnasium and a 41,037-sq. ft. assembly building/children's ministry on the southeast portion of the Project site. Additionally, a 1,500-sq. ft. two-story building that would serve as a maintenance building, caretaker residence, and lavatory facilities would be developed on the southwest portion of the Project site, as well as an ancillary 54,000-sq. ft. sports field, sports courts, and a 7,838-sq. ft. water quality bioretention basin. Associated improvements to the property would also include roadway improvements, utility infrastructure, landscaping, exterior lighting, and storm water drainage infrastructure. The Project would require connections



to existing off-site utility lines within SR-18 (abuts the Project site to the south), as well as a connection to the existing water main in Daley Canyon Road. The Project also proposes to construct a driveway entrance to the site along SR-18 that would include a signalized three-way intersection as well as an unsignalized emergency access driveway. A summary of the discretionary approval sought by the Project Applicant from the County of San Bernardino is provided below. Additional discretionary and administrative actions that would be necessary to implement the proposed Project are listed in Table 2-5, *Matrix of Project Approvals/Permits*, at the end of this DREIR section.

2.4.1 CONDITIONAL USE PERMIT (CUP P201700270)

A CUP is the discretionary approval required by the County of San Bernardino to implement the Project. According to Section 85.06.010 of the San Bernardino County Development Code, a CUP provides a process for reviewing uses and activities that may be appropriate in the applicable land use zoning district (i.e., development of a church campus in the IC zoning district), but whose effects on a site and its surroundings cannot be determined before being proposed for a specific site (San Bernardino County, 2018, Section 85.06.010). The component parts of the Project's CUP application are described in further detail in the subsections below.

A. *Site Plan*

1. *Proposed Buildings*

The Project's CUP application includes a site plan for the Church of the Woods development, which is depicted on Figure 2-7, *Proposed Site Plan*. Additionally, the components of the Project's site plan are summarized in Table 2-1, *Site Plan Statistical Abstract*. The site plan shows the southern portion of the Project site would be developed with a church campus that would include a two-story building consisting of a 27,364-sq. ft. gymnasium and a 41,037-sq. ft. assembly building/children's ministry on the southeast portion of the Project site. Additionally, a 1,500-sq. ft. two-story building that would serve as a maintenance building, caretaker residence, and lavatory facilities would be developed on the southwest portion of the Project site.

2. *Lighting*

The Project would include pole-mounted lighting within the parking lot areas, internal roadways, and pedestrian walkways. Lighting fixtures would not be provided at the 54,000-sq. ft. sports field, sports courts, or the children's play areas. The parking lot lighting would be placed atop approximately 20-foot tall lighting poles bound to concrete bases (bases would stand 3 feet above ground elevation) with single or multiple fixtures. In addition, the buildings would include exterior wall-mounted lighting for entryways and low-level lighting would be provided along the pathways. All outdoor lighting would be shielded and directed on site in compliance with Development Code Section 83.07.040 (Glare and Outdoor Lighting – Mountain and Desert Regions).



- NOTES:
1. RECORD OWNER: CHURCH OF THE WOODS, A CALIFORNIA CORPORATION; P.O. BOX 2000; LAKE ARROWHEAD, CA; 92352; 909-337-5483.
 2. PUBLIC UTILITIES ARE AS FOLLOWS:
A) WATER: CRESTLINE LAKE ARROWHEAD WATER AGENCY; P.O. BOX 3880; CRESTLINE, CA 92325; 909-338-1775
B) SEWER: LAKE ARROWHEAD COMMUNITY SERVICES DIST; P. O. BOX 789; LAKE ARROWHEAD, CA 92352; 909-337-8555
C) NATURAL GAS: SO. CAL. GAS CO.; P. O. BOX 6226; SAN BERNARDINO, CA; 909-889-9711
D) ELECTRIC: SO. CAL. EDISON CO.; P. O. BOX 96; RIM FOREST, CA; 92378; 909-337-2564
E) TELEPHONE: VERIZON; 1500 CRAFTON AVE.; MENTONE, CA; 92359; 909-793-7441
F) CABLE TV: FALCON CABLE; P. O. BOX 9; RIM FOREST, CA; 92378; 909-336-2457
 3. THE CURRENT AND PROPOSED GENERAL PLAN USE DISTRICT IS LA/IC.
 4. ENTRY SIGNS WILL BE SUBMITTED FOR REVIEW AT A LATER DATE.
 5. ALL PARKING AREAS WILL BE SURFACED WITH ASPHALT. THE MINIMUM PARKING SPACE WILL BE 9'x19' TYPICAL.
 6. TREES TO BE REMOVED ARE DISCUSSED IN THE FORESTERS REPORT PREPARED BY JOHN HATCHER DATED 3-25-03.

PROJECT SUMMARY:

BUILDINGS

PHASE 1	
YOUTH CENTER GYMNASIUM.	
FIRST FLOOR	18,305 SF
SECOND FLOOR	8,579 SF
SNACK BAR	480 SF
TOTAL SF: 27,364 SF	

PHASE 2	
ASSEMBLY BUILDING - CHILDREN'S MINISTRY	
FIRST FLOOR	27,254 SF
SECOND FLOOR	13,783 SF
TOTAL = 41,037 SF	

MAINTENANCE BUILDING & CARETAKERS RESIDENCE	
FIRST FLOOR	750 SF
SECOND FLOOR	750 SF
TOTAL SF= 1,500 SF	
TOTAL PH 2= 42,537 SF	

PROJECT SUMMARY

BUILDING COVERAGE (FOOTPRINT)	46,309 SF	3.9 %
DRIVEWAYS & PARKING	199,478 SF	16.9 %
CONCRETE WALKS & PATIOS	28,200 SF	2.2 %
SPORT COURTS	9,508 SF	0.8 %
SPORTS FIELD	54,000 SF	4.6 %
LANDSCAPE AREA	182,960 SF	15.5 %
LANDSCAPE SLOPES	66,133 SF	5.6 %
WATER QUALITY BASIN	7,838 SF	0.6 %
NATURAL AREA	1,013,670 SF	49.9 %
TOTAL PROJECT= (27.12 ACRES)	1,181,363 SF	100.0 %

PARKING SUMMARY (9x19 TYPICAL)

	REQUIRED	PROVIDED
CHURCH OF THE WOODS (BUILD OUT)		
600 SEATS (1 space for 3 seats)	200	311

IMPROVEMENT NOTES:

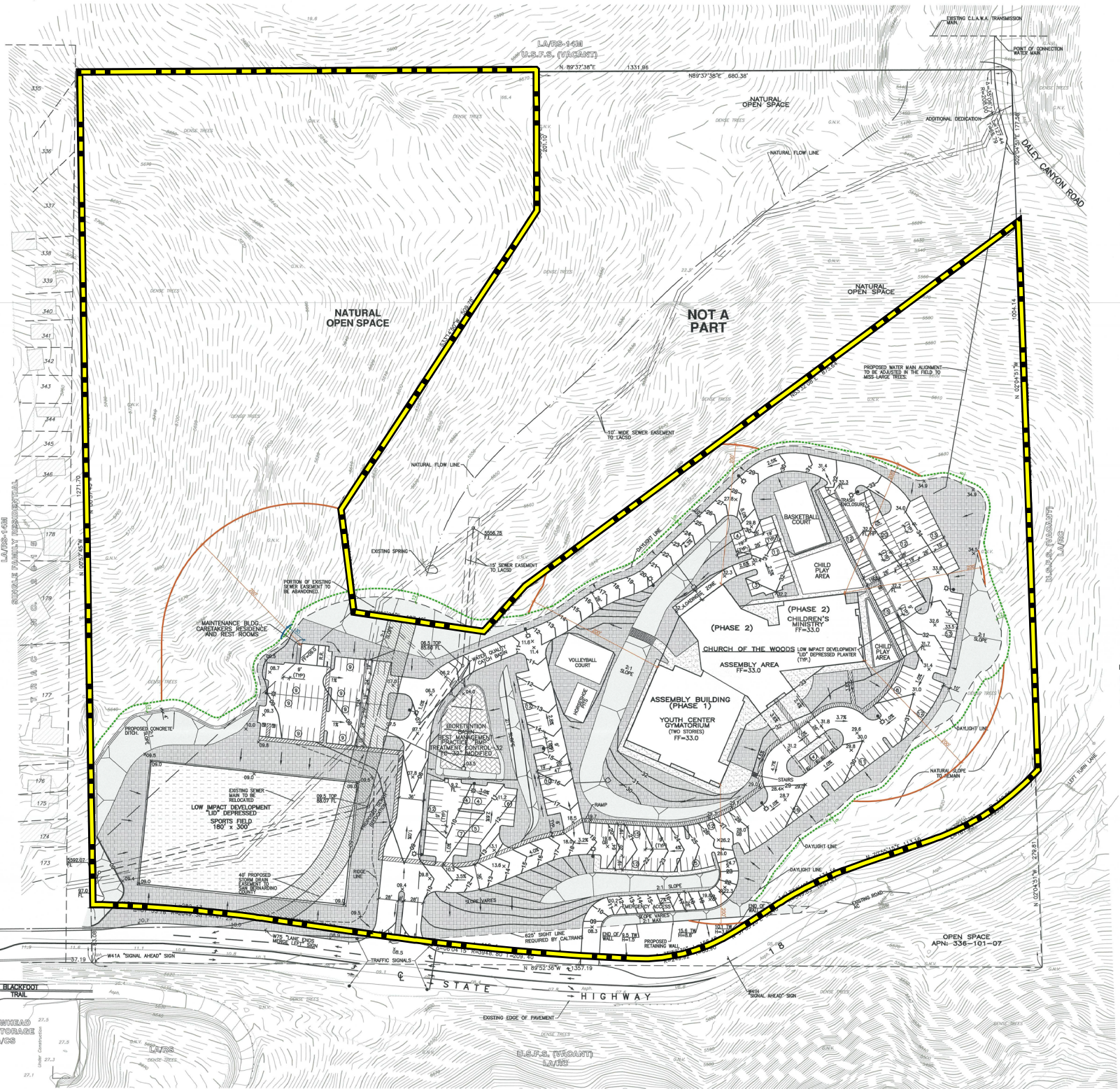
1. DRIVE AISLES AND PARKING SPACES TO BE A.C. PAVEMENT AND BASE PER GEOTECHNICAL ENGINEERING RECOMMENDATIONS.
2. ALL PAVED ACCESS AREAS TO BE BORDERS BY 6" CONCRETE CURB.
3. SPORTS FIELD AND LANDSCAPE AREAS TO BE DEPRESSED AS PART OF STORM WATER RUNOFF MITIGATION PLAN.
4. SEE WATER QUALITY MANAGEMENT PLAN FOR DETAILS ON MODIFIED BIOTENTION BASIN.
5. BUILDINGS WITHIN CAMPUS ARE CONNECTED BY A.D.A. PATH OF TRAVEL. NO A.D.A. PATH OF TRAVEL IS PROVIDED TO ANY STATE HIGHWAYS BECAUSE PEDESTRIAN TRAFFIC IS NOT ALLOWED WITHIN STATE HIGHWAY RIGHT OF WAY.

LEGEND:

- INDICATES PLAY FIELD
- INDICATES ORNAMENTAL LANDSCAPE
- INDICATES SLOPE
- INDICATES CONCRETE WALKWAY
- INDICATES A.D.A. PATH OF TRAVEL
- INDICATES DIRECTION OF FLOW
- FF INDICATES FINISH FLOOR
- INDICATES FINISH GRADE
- INDICATES EXISTING CONTOURS
- INDICATES PROPOSED CONTOURS
- INDICATES LIGHT POLE

LEGEND

- ZONE 3 FUEL MODIFICATION (80,550.48 SF)
- ZONE 2 FUEL MODIFICATION (85.07 SF)
- DISTURBED AREA GRADING (BUFFER) (19,684.73 SF)



Source(s): McKee Engineering (06-28-2017)



Figure 2-7

PROPOSED SITE PLAN



Table 2-1 Site Plan Statistical Abstract

Project Summary		
Project Component	Square Feet (sq. ft.)	Percentage of Project
Building Coverage (Footprint)	46,309 sq. ft.	3.9%
Driveways and Parking	199,478 sq. ft.	16.9%
Concrete Walks and Patios	26,200 sq. ft.	2.2%
Sports Courts	9,508 sq. ft.	0.8%
Sports Field	54,000 sq. ft.	4.6%
Landscape Area	182,960 sq. ft.	15.5%
Landscape Slopes	66,133 sq. ft.	5.6%
Water Quality Basin	7,838 sq. ft.	0.6%
Natural Area	588,937	49.9%
<i>Total Project Area:</i>	<i>1,181,363 sq. ft.</i>	<i>100.0%</i>

Source: (Project Applicant, 2018)

3. *Circulation and Parking*

The developed portion of the Project site would include several internal drive aisles and parking lot areas that would include a total of 311 parking stalls (200 required). Primary vehicular access onto the Project site would be provided by a driveway constructed in the central portion of the Project site's frontage along SR-18. The proposed Project would widen the northern side of SR-18 for an approximately 600-foot segment of the roadway along the Project site's frontage adjacent to the access driveway (approximately 300 feet in each direction from the driveway) by 26 feet to accommodate an eastbound left-turn lane and a westbound deceleration/acceleration lane. In addition, the Project would install a traffic signal at the proposed driveway (three-way intersection). A secondary emergency access (egress only) would occur at SR-18 approximately 325 feet to the east of the proposed access driveway. Entry monumentation signage would be installed at the driveway entry to the Project site. Access to the site would be controlled by gates at the entry, which would be closed and locked when no activities are scheduled at the facility. A total of 26,200 sq. ft. of pedestrian walkways and outdoor patios would be constructed on the Project site.

4. *Water and Waste Water Conveyance Facilities*

Water service would be provided by a lateral extension from the existing 12-inch water main located in Daley Canyon Road approximately 100 feet north of and parallel with the north boundary of the Project site. The point of connection would be on the west side of Daley Canyon Road. The proposed lateral would extend southerly approximately 150 feet from the point of connection to a point within the Project boundary. Water would be distributed throughout the developed portion of the Project site through the proposed 10-inch on-site water line that would extend in a southerly direction from the point of connection in Daley Canyon Road to the northeasterly area of the developed site. The alignment of this lateral will be adjusted in the field to avoid large trees.

If the San Bernardino County Rimforest Storm Drain Project is constructed prior to the Church of the Woods Project, the water lateral would be located within the access road of the Storm Drain Project.



There is an existing 8-inch sewer main within a 10-foot sewer main easement located on the southwest portion of the Project site. The Project proposes to relocate this existing sewer main to avoid conflicts with the Storm Drain Project and excessive depths from the finish grade of the Project to the existing sewer main. A 15-foot wide sewer easement is proposed to be granted to Lake Arrowhead Community Services District for the new sewer main location. The relocation of the existing sewer main and easement would begin where the existing sewer crosses the west boundary line of the Project site, near the southwest corner. The relocation would progress in a northeasterly and northerly direction and connect to the existing sewer main and easement approximately 600 feet north of SR-18.

5. Open Space, Landscaped Areas, and Recreation Features

As depicted on Figure 2-7 and Figure 2-8, *Conceptual Landscape Plan*, the Project site would include a total of 182,960 sq. ft. of landscaped areas and 66,133 sq. ft. of landscaped manufactured slopes. Additionally, approximately 50% of the Project site (totaling 13.5 acres or 588,937 sq. ft.) would remain as natural open space.

The Project includes the development of a low-impact development (LID) 54,000-sq. ft. sports field on the southwest portion of the Project site. In addition, a total of 9,508 sq. ft. of sports courts are proposed at the Project site, which would include a horseshoe pit and volleyball court in the central portion of the church campus, and a basketball court and two child play areas on the east portion of the church campus.

6. Drainage Plan

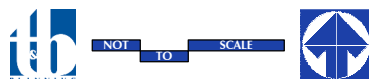
To alleviate flooding and erosion hazards in the Rimforest community, the County of San Bernardino approved the Rimforest Storm Drain project in May 2017. As such, regional storm drain improvements are expected to occur in the area, a portion of which will pass through the southwestern portion of the Project site. In total, the Rimforest Storm Drain project will physically impact approximately 0.10 acres of the Project site as documented in the Rimforest Storm Drain Project Final EIR (SCH No. 2015051070). To accommodate development associated with the proposed Project, a network of drainage lines and water quality catch basins are proposed on the Project site to accommodate storm water runoff flows. As depicted on Figure 2-7, a bioretention basin would be developed on the south-central portion of the Project site to capture storm water runoff from the northern and eastern portions of the Project site. The bioretention basin is designed to slow and treat on-site storm water runoff before it is discharged to the San Bernardino County Flood Control District (SBCFCD) storm drain system. Additionally, the proposed on-site landscaped areas and the sports field proposed on the southwest portion of the Project site are designed to infiltrate storm water as a part of the Project's drainage plan.

As shown on Figure 2-7, the Project proposes a 40-foot storm drain easement for the SBCFCD that would traverse the southwest portion of the Project site in a northeasterly to southwesterly orientation. The proposed 40-foot SBCFCD easement would accommodate the on-site subsurface flood control improvements to be constructed by San Bernardino County as part of SBCFCD's Rimforest Storm Drain project, which would convey storm water flows from off-site areas north of the Project site through the Project site and ultimately connect to a future improved SBCFCD storm drain facility within SR-18. The on-site SBCFCD storm drain facility improvements would include the installation and operation of a 750-foot long, 60-inch reinforced



Source(s): SPLA (10-26-2015)

Figure 2-8



CONCEPTUAL LANDSCAPE PLAN



concrete pipe (RCP) and located within the 40-foot-wide SBCFCD easement shown on Figure 2-7. Because the proposed Project's drainage plan is dependent on connecting to facilities that will be installed as part of San Bernardino County's Rimforest Storm Drain Project, the Church of the Woods Project is proposed to be constructed concurrent with or following installation of these regional drainage improvements. However, in the event that the proposed Church of the Woods Project is constructed prior to implementation of the Rimforest Storm Drain project, the Project Applicant would be responsible for constructing the on-site portions of the Rimforest Storm Drain project, consisting of a 750-foot long, 60-inch RCP located the 40-foot-wide SBCFCD easement shown on Figure 2-7. During the interim period following development of the proposed Church of the Woods Project and preceding completion of the Rimforest Storm Drain project, storm water would sheet flow through the impervious surfaces of the Project site in a northeasterly direction. In the event that the Project Applicant constructs the on-site portions of the Rimforest Storm Drain project, the Project Applicant would be required to obtain a Clean Water Act (CWA) Section 404 permit from the United States Army Corps of Engineers (USACE) and a Section 1602 Streambed Alteration Agreement from the CDFW. The facilities to be installed as part of the Rim Forest Storm Drain Project are covered in the Rim Forest Storm Drain Project EIR (SCH No. 2015051070).

2.5 PROJECT CONSTRUCTION AND OPERATIONAL CHARACTERISTICS

2.5.1 CONSTRUCTION DETAILS

A. *Proposed Physical Disturbances*

1. *Grading Activities*

Physical disturbances necessary to implement the proposed Project are depicted on Figure 2-9, *Proposed Physical Disturbances*. As shown, the Project would disturb approximately 16.9 acres as a result of grading, including approximately 0.10 acre that will have been previously disturbed by San Bernardino County to install regional drainage improvements as part of the Rimforest Storm Drain project. According to the *Church of the Woods Earthwork Analysis Report* (DREIR Technical Appendix D2), preliminary grading quantities are calculated to be 195,297 cubic yards of excavation or cut materials and 119,313 cubic yards of fill material (W.J. McKeever Inc., Appendix F). Excavated materials would be placed in the southwestern and northwestern portions of the Project site for construction of the sports fields, entry, and parking areas. Additionally, the Earthwork Analysis (DREIR Technical Appendix D2) calculated that per the Engineering Geology and Soils Report (LOR, 2001; DREIR Technical Appendix D1), there is approximately 42,368 cubic yards of material on the Project site consisting of highly organic topsoil that is not considered suitable for reuse as engineered fill. This unsuitable material would be transported to Heaps Peak Transfer Station by truck as part of the Project's construction process. Once at the transfer station, materials are loaded into larger trucks and transferred to the Mid-Valley Landfill for disposal. After removal of unsuitable material, remedial grading shrinkage, and mass excavation shrinkage, the Project site would be balanced by adjusting the grades in the area of the proposed sports field, entry load, and parking lots proposed on the western portion of the Project site.

Off-site grading would be required to install a water main extending from the northeast Project site boundary to the existing water main located along Daley Canyon Road. The proposed water main would require the excavation of a trench measuring approximately 2 feet wide by 3 feet deep. Along the southern Project site boundary, small areas of off-site grading would be required to implement slope stabilization measures,



- NOTES:
1. RECORD OWNER: CHURCH OF THE WOODS, A CALIFORNIA CORPORATION; P.O. BOX 2000; LAKE ARROWHEAD, CA; 92352; 909-337-5483.
 2. PUBLIC UTILITIES ARE AS FOLLOWS:
A) WATER: CRESTLINE LAKE ARROWHEAD WATER AGENCY; P.O. BOX 3880; CRESTLINE, CA 92325; 909-338-1775
B) SEWER: LAKE ARROWHEAD COMMUNITY SERVICES DIST; P. O. BOX 789; LAKE ARROWHEAD, CA 92352; 909-337-8555
C) NATURAL GAS: SO. CAL. GAS CO.; P. O. BOX 6226; SAN BERNARDINO, CA; 909-889-9711
D) ELECTRIC: SO. CAL. EDISON CO.; P. O. BOX 96; RIM FOREST, CA; 92378; 909-337-2564
E) TELEPHONE: VERIZON; 1500 CRAFTON AVE.; MENTONE, CA; 92359; 909-793-7441
F) CABLE TV: FALCON CABLE; P. O. BOX 9; RIM FOREST, CA; 92378; 909-336-2457
 3. THE CURRENT AND PROPOSED GENERAL PLAN USE DISTRICT IS LA/IC.
 4. ENTRY SIGNS WILL BE SUBMITTED FOR REVIEW AT A LATER DATE.
 5. ALL PARKING AREAS WILL BE SURFACED WITH ASPHALT. THE MINIMUM PARKING SPACE WILL BE 9'x19' TYPICAL.
 6. TREES TO BE REMOVED ARE DISCUSSED IN THE FORESTERS REPORT PREPARED BY JOHN HATCHER DATED 3-25-03.

PROJECT SUMMARY:

BUILDINGS

PHASE 1	
YOUTH CENTER GYMNASIUM.	
FIRST FLOOR	18,305 SF
SECOND FLOOR	8,579 SF
SNACK BAR	480 SF
TOTAL SF:	27,364 SF

PHASE 2	
ASSEMBLY BUILDING - CHILDREN'S MINISTRY	
FIRST FLOOR	27,254 SF
SECOND FLOOR	13,783 SF
TOTAL =	41,037 SF

MAINTENANCE BUILDING & CARETAKERS RESIDENCE	
FIRST FLOOR	750 SF
SECOND FLOOR	750 SF
TOTAL SF=	1,500 SF
TOTAL PH 2=	42,537 SF

PROJECT SUMMARY

BUILDING COVERAGE (FOOTPRINT)	46,309 SF	3.9 %
DRIVEWAYS & PARKING	199,478 SF	16.9 %
CONCRETE WALKS & PATIOS	26,200 SF	2.2 %
SPORT COURTS	9,508 SF	0.8 %
SPORTS FIELD	54,000 SF	4.6 %
LANDSCAPE AREA	182,960 SF	15.5 %
LANDSCAPE SLOPES	66,133 SF	5.6 %
WATER QUALITY BASIN	7,838 SF	0.6 %
NATURAL AREA	1,013,670 SF	49.9 %
TOTAL PROJECT= (27.12 ACRES)	1,181,363 SF	100.0 %

PARKING SUMMARY (9x19 TYPICAL)

	REQUIRED	PROVIDED
CHURCH OF THE WOODS (BUILD OUT)		
600 SEATS (1 space for 3 seats)	200	311

IMPROVEMENT NOTES:

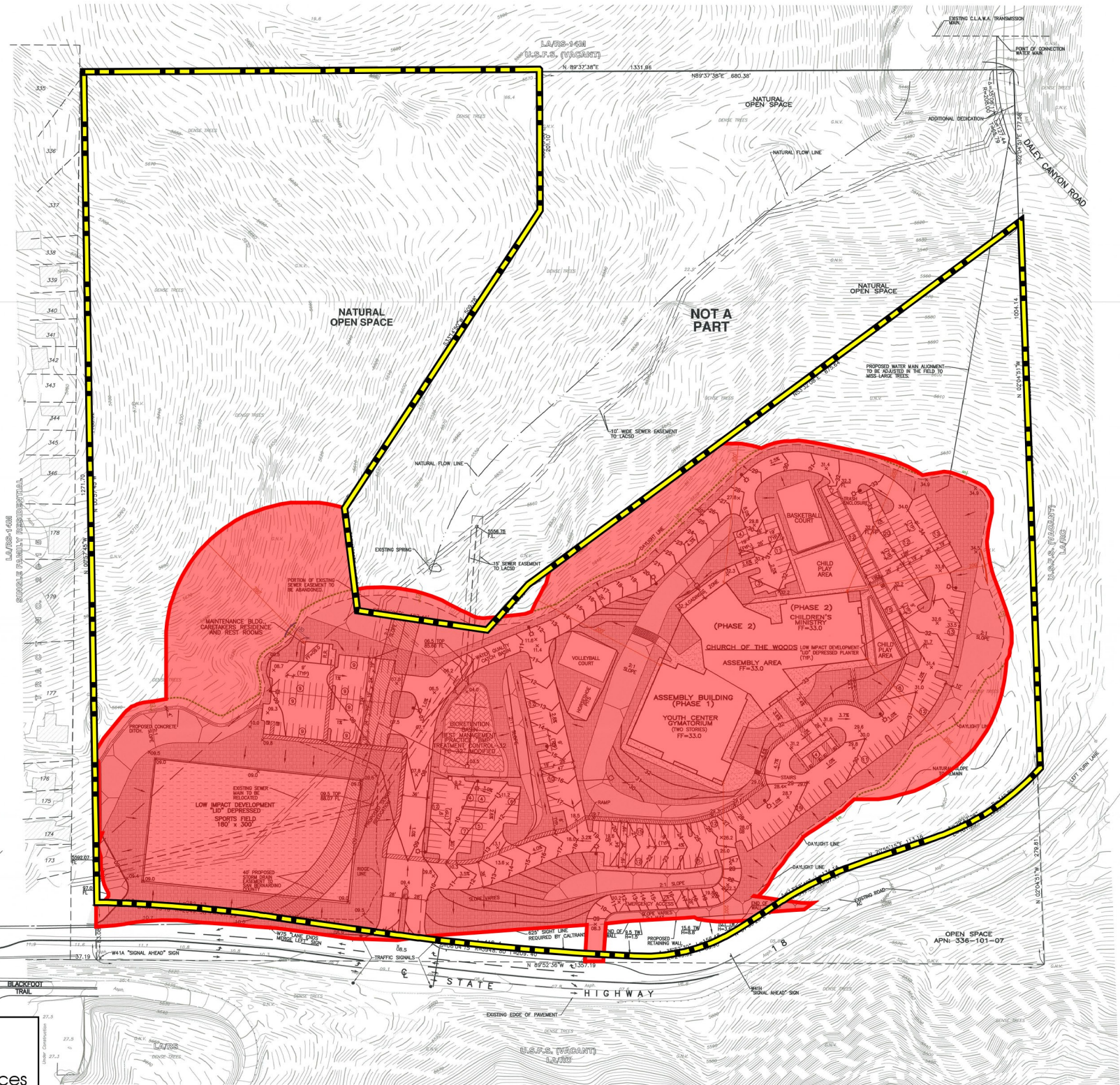
1. DRIVE AISLES AND PARKING SPACES TO BE A.C. PAVEMENT AND BASE PER GEOTECHNICAL ENGINEERING RECOMMENDATIONS.
2. ALL PAVED ACCESS AREAS TO BE BORDERS BY 6" CONCRETE CURB.
3. SPORTS FIELD AND LANDSCAPE AREAS TO BE DEPRESSED AS PART OF STORM WATER RUNOFF MITIGATION PLAN.
4. SEE WATER QUALITY MANAGEMENT PLAN FOR DETAILS ON MODIFIED BIOTRETENTION BASIN.
5. BUILDINGS WITHIN CAMPUS ARE CONNECTED BY A.D.A. PATH OF TRAVEL. NO A.D.A. PATH OF TRAVEL IS PROVIDED TO ANY STATE HIGHWAYS BECAUSE PEDESTRIAN TRAFFIC IS NOT ALLOWED WITHIN STATE HIGHWAY RIGHT OF WAY.

LEGEND:

- INDICATES PLAY FIELD
- INDICATES ORNAMENTAL LANDSCAPE
- INDICATES SLOPE
- INDICATES CONCRETE WALKWAY
- INDICATES A.D.A. PATH OF TRAVEL
- INDICATES DIRECTION OF FLOW
- FF INDICATES FINISH FLOOR
- 23.8 INDICATES FINISH GRADE
- INDICATES EXISTING CONTOURS
- INDICATES PROPOSED CONTOURS
- INDICATES LIGHT POLE

LEGEND

Proposed Physical Disturbances



Source(s): McKee Engineering (06-28-2017)

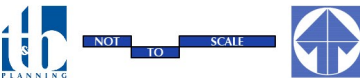


Figure 2-9

PROPOSED PHYSICAL DISTURBANCES



implement landscape improvements along the Project site's frontage with SR-18, and construct the proposed emergency access from SR-18. No other on- or off-site physical ground disturbances are anticipated from Project implementation.

2. Fuel Modification Zones

In order to comply with San Bernardino County requirements for fire hazard control, fuel modification zones (FMZs) would be established around developed portions of the Project site that would encompass a total of approximately 1.9 acres. Of the 1.9 acres of FMZs, 85.07 sq. ft. would be categorized as defensible space zone 2 (hereafter referred to as "FMZ 2"), while 80,550.48 sq. ft. would be categorized as defensible space zone 3 (hereafter referred to as "FMZ 3"). The fuel modification requirements within each FMZ are discussed below. It should be noted that the FMZs associated with the Project would not extend off-site.

FMZ 2 would extend to 30 feet from the northwest corner of the proposed maintenance building/caretaker's residence. All dead logs, branches, litter, and any decaying organic material (i.e., leaves, needles, and woody material) would be removed from the ground within FMZ 2. Additionally, FMZ 2 would require the thinning of trees and removal of some trees to maintain spacing of 20 to 30 feet between tree stems. Within FMZ 2, shrubs would be thinned to provide adequate clearance between shrubs and maintenance of shrub height, and shrub pruning would be undertaken to minimize fuel continuity. Trees within FMZ 2 would be pruned to a height of 15 feet above ground level. Ongoing periodic maintenance would be required in the FMZ 2 area to ensure that the conditions of this zone are met.

FMZ 3 would extend 200 feet from the Project's proposed on-site buildings. All dead logs, branches, litter, and decaying organic material (i.e., leaves, needles, and woody material) would be removed from the ground within FMZ 3. Standing dead material, stems, vines, and non-productive trees would be removed from FMZ 3. Thinning and pruning of trees and shrubs would also occur within FMZ 3. Ongoing periodic maintenance would be required in the FMZ 2 area to ensure that the conditions of this zone are met.

B. Timing and Phasing of Construction

The Project is proposed to be constructed in two (2) phases, as follows. Because the Project's drainage system is dependent on prior installation of the regional Rimforest Storm Drain project by the County of San Bernardino, the Project's expected dates of completion indicated below may be adjusted to account for scheduling of the Rimforest Storm Drain project, but would be no earlier than indicated:

- Phase 1 (2018) – Construction of a 27,364-sq. ft. assembly building housing a youth center/gymnasium, 54,000-sq. ft. sports field, sports courts, child play areas, internal circulation roadways, pedestrian walkways, landscaped areas, parking; and
- Phase 2 (2021) – Construction of a 41,037-sq. ft. addition to the assembly building that would include an assembly area and children's ministry, as well as a 1,500-sq. ft. maintenance building/caretaker residence.



Table 2-2, *Expected Project Construction* below provides the anticipated construction schedule for the proposed Project. Table 2-3, *Construction Equipment Assumptions*, provides a list of construction equipment anticipated to be used during each construction phase. Figure 2-10, *Project Phasing Plan*, illustrates which components of the Project would be constructed during Phase 1 and Phase 2 of the Project.

Table 2-2 Expected Project Construction Phase Durations

Activity	Number of Days
Rough Grading	60
Fine Grading	15
Building Construction	300
Architectural Coating	40
Paving	20

Source: (Project Applicant, 2018)

Note: Because the Project's drainage system is dependent on prior installation of the regional Rimforest Storm Drain project by the County of San Bernardino, the Project's expected start and end dates of construction may be adjusted to account for scheduling of the Rimforest Storm Drain project, but would be no earlier than indicated. The duration (number of days) would remain constant regardless of the start state.

Table 2-3 Construction Equipment Assumptions

Activity	Equipment	Number	Hours Per Day
Rough Grading	Excavators	1	8
	Rubber Tired Dozers	2	8
	Scrapers	2	1
	Tractor/Loaders/Backhoes	1	8
Fine Grading	Excavators	2	8
	Graders	1	8
	Skid Steer Loaders	1	8
	Rollers	1	8
	Tractors/Loaders/Backhoes	1	8
Building Construction	Cranes	1	8
	Forklifts	3	8
	Generator Sets	1	8
	Tractor/Loader/Backhoes	3	8
	Welders	1	8
Architectural Coating	Air Compressors	1	8
Paving	Paving Equipment	2	8
	Pavers	2	8
	Rollers	2	8

Source: (Project Applicant, 2018)



- NOTES:
1. RECORD OWNER: CHURCH OF THE WOODS, A CALIFORNIA CORPORATION; P.O. BOX 2000; LAKE ARROWHEAD, CA. 92352; 909-337-5483.
 2. PUBLIC UTILITIES ARE AS FOLLOWS:
 - A) WATER: CRESTLINE LAKE ARROWHEAD WATER AGENCY; P.O. BOX 3880; CRESTLINE, CA. 92325; 909-338-1775
 - B) SEWER: LAKE ARROWHEAD COMMUNITY SERVICES DIST; P. O. BOX 789; LAKE ARROWHEAD, CA. 92352; 909-337-8555
 - C) NATURAL GAS: SO. CAL. GAS CO.; P. O. BOX 6226; SAN BERNARDINO, CA. 909-889-9711
 - D) ELECTRIC: SO. CAL. EDISON CO.; P. O. BOX 96; RIM FOREST, CA. 92378; 909-337-2564
 - E) TELEPHONE: VERIZON; 1500 CRAFTON AVE.; MENTONE, CA. 92359; 909-793-7441
 - F) CABLE TV: FALCON CABLE; P. O. BOX 9; RIM FOREST, CA. 92378; 909-336-2457
 3. THE CURRENT AND PROPOSED GENERAL PLAN USE DISTRICT IS LA/IC.
 4. ENTRY SIGNS WILL BE SUBMITTED FOR REVIEW AT A LATER DATE.
 5. ALL PARKING AREAS WILL BE SURFACED WITH ASPHALT. THE MINIMUM PARKING SPACE WILL BE 9'x19' TYPICAL.
 6. TREES TO BE REMOVED ARE DISCUSSED IN THE FORESTERS REPORT PREPARED BY JOHN HATCHER DATED 3-25-03.

PROJECT SUMMARY:

BUILDINGS

PHASE 1

YOUTH CENTER GYMATORIUM.	18,305 SF
FIRST FLOOR	8,579 SF
SECOND FLOOR	480 SF
SNACK BAR	480 SF
TOTAL SF:	27,364 SF

PHASE 2

ASSEMBLY BUILDING - CHILDREN'S MINISTRY	27,254 SF
FIRST FLOOR	13,783 SF
SECOND FLOOR	13,783 SF
TOTAL =	41,037 SF

MAINTENANCE BUILDING & CARETAKERS RESIDENCE

FIRST FLOOR	750 SF
SECOND FLOOR	750 SF
TOTAL SF=	1,500 SF
TOTAL PH 2=	42,537 SF

PROJECT SUMMARY

BUILDING COVERAGE (FOOTPRINT)	46,309 SF	3.9 %
DRIVEWAYS & PARKING	199,478 SF	16.9 %
CONCRETE WALKS & PATIOS	26,200 SF	2.2 %
SPORTS COURTS	9,508 SF	0.8 %
SPORTS FIELD	54,000 SF	4.6 %
LANDSCAPE AREA	182,960 SF	15.5 %
LANDSCAPE SLOPES	66,133 SF	5.6 %
WATER QUALITY BASIN	7,838 SF	0.6 %
NATURAL AREA	1,013,670 SF	49.9 %
TOTAL PROJECT= (27.12 ACRES)	1,181,363 SF	100.0 %

PARKING SUMMARY (9x19 TYPICAL)

	REQUIRED	PROVIDED
CHURCH OF THE WOODS (BUILD OUT)		
600 SEATS (1 space for 3 seats)	200	311

IMPROVEMENT NOTES:

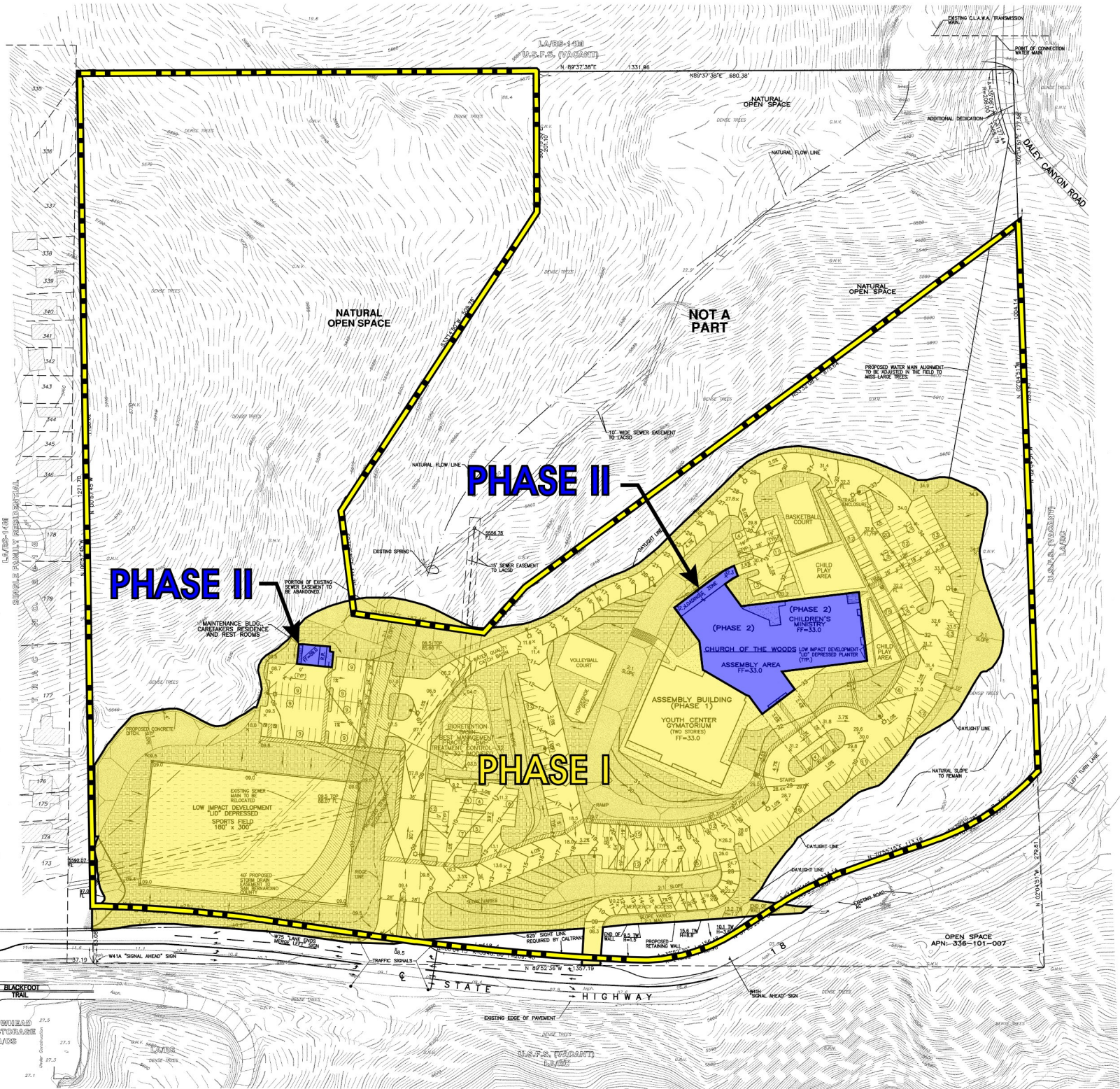
1. DRIVE AISLES AND PARKING SPACES TO BE A.C. PAVEMENT AND BASE PER GEOTECHNICAL ENGINEERING RECOMMENDATIONS.
2. ALL PAVED ACCESS AREAS TO BE BORDERED BY 6" CONCRETE CURB.
3. SPORTS FIELD AND LANDSCAPE AREAS TO BE DEPRESSED AS PART OF STORM WATER RUNOFF MITIGATION PLAN.
4. SEE WATER QUALITY MANAGEMENT PLAN FOR DETAILS ON MODIFIED BIOTENTION BASIN.
5. BUILDINGS WITHIN CAMPUS ARE CONNECTED BY A.D.A. PATH OF TRAVEL. NO A.D.A. PATH OF TRAVEL IS PROVIDED TO ANY STATE HIGHWAYS BECAUSE PEDESTRIAN TRAFFIC IS NOT ALLOWED WITHIN STATE HIGHWAY RIGHT OF WAY.

LEGEND:

- INDICATES PLAY FIELD
- INDICATES ORNAMENTAL LANDSCAPE
- INDICATES SLOPE
- INDICATES CONCRETE WALKWAY
- INDICATES A.D.A. PATH OF TRAVEL
- INDICATES DIRECTION OF FLOW
- FF INDICATES FINISH FLOOR
- 28.8' INDICATES FINISH GRADE
- INDICATES EXISTING CONTOURS
- INDICATES PROPOSED CONTOURS
- INDICATES LIGHT POLE

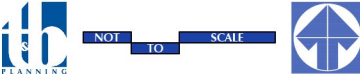
LEGEND

- Phase I
- Phase II



Source(s): McKeever Engineering (04-25-2017)

Figure 2-10



PROJECT PHASING PLAN



2.5.2 EQUIPMENT STAGING

Throughout the Project's construction phase, a minimum 150-foot setback would be maintained between construction equipment, stockpiles, staging areas, the northern half of the proposed athletic field, and the northern edge of the paved portion of SR-18. The setback would be intended to reduce or screen the visibility of the staged equipment and materials from passengers in vehicles traveling along SR-18 during the Project's construction activities.

2.5.3 OPERATIONAL CHARACTERISTICS

As shown on Table 2-4, *Church of the Woods Operational Activities*, the proposed Project would operate as a community religious facility, primarily accommodating two worship services (including children's Sunday school) that are typically held on Sundays between the hours of 9:00 a.m. and 1:00 p.m. Additionally, the facility would be used to accommodate other ancillary religious-oriented and family-oriented activities for the congregation such as: group bible study, choir practices, fellowship breakfasts and dinners, wedding ceremonies, funeral/memorial services, and seasonal/holiday program events. The Project site would be maintained by an on-site (live-in) caretaker. An administrative staff consisting of up to approximately 13 employees would be present within the Project site during normal business hours (8:00 a.m. to 5:00 p.m. Monday through Friday) to accommodate the management of the ministry.

A. *Population*

Implementation of the proposed Project would result in the construction of a caretaker residence on the western portion of the proposed Church of the Woods campus. The caretaker residence would house up to one (1) tenant whom would be required to be a Church of the Woods employee. No other dwelling units are proposed to be constructed at the Project site as part of the Project.

B. *Traffic Volumes*

Based on a Project-specific traffic impact analysis conducted by Translutions, Inc. (*DREIR Technical Appendix H*), and as shown in Subsection 3.I, *Transportation and Circulation*, to this DREIR, the proposed Project is calculated to result in a total of 390 peak hour trips on Saturdays, 394 peak hour trips on Sundays, 657 daily trips on Saturdays, and 1,112 daily trips on Sundays. (Translutions, Inc., 2018, p. 5)

C. *Water Demand*

Neither the San Bernardino County General Plan nor the San Bernardino County General Plan Final EIR contain water demand rates that could be utilized to estimate the Project's water demand. Table 4-1-2, *Non-Residential Unit Water Demands*, of the Water Agencies' Standards Design Guidelines for Water and Sewer Facilities, identifies a water demand factor of 5,000 gallons/net acre per day for "Commercial and Institutional" land uses (WAS, 2014, Table 4-1-2). In order to calculate the total water demand for the Project, first the acreage of the natural open space area (13.5 acres) was subtracted from the total gross acreage of the proposed Project (27.12 acres) because this area would not require irrigation. The resulting gross acreage of approximately 13.6 acres was then multiplied by the most conservative gross acreage to net acreage conversion factor of 0.40 (provided in Table 4-1-3, *Gross Acreage to Net Acreage Conversion*, of the Water Agencies' Standards Design Guidelines for Water and Sewer Facilities), which yielded a net



Table 2-4 Church of the Woods Operational Activities

Activity	Day/Time	Estimated No. of Participants		Location	
		Phase I	Phase II	Phase I	Phase II
Sunday Morning Service	Sunday 8:30 A.M. to 10:00 A.M. and 11:00 A.M. to 12:30 P.M.	600 per service	600 per service	Assembly Building	Assembly Building/Children's Ministry
Wednesday Night Service	Wednesday 5:00 P.M. to 8:00 P.M.	600 per service	600 per service	Assembly Building	Assembly Building/Children's Ministry
Aerobics	Monday, Wednesday, Friday 8:00 A.M. to 11:00 A.M.	30-40 per class	30-40 per class	Youth Center Gymnasium	Assembly Building
Fife and Drum	Monday 5:00 P.M. to 8:00 P.M.	30	30	Assembly Building	Assembly Building
Women's Bible Study	Tuesday 8:00 A.M. to 1:00 P.M.	100-150	150-200	Assembly Building	Assembly Building
Choir	Tuesday 7:00 P.M. to 8:00 P.M.	30-40	30-40	Assembly Building	Assembly Building
Senior High Youth Group	Tuesday 6:00 P.M. to 8:00 P.M.	50-60	100-150	Assembly Building	Youth Center Gymnasium
Women's Prayer Group	Wednesday 8:00 A.M. to 10:00 A.M.	25	50	Assembly Building	Assembly Building
Men's Bible Study Group	Saturday 8:00 A.M. to 10:00 A.M.	25	35	Assembly Building	Assembly Building
Band Practice	Saturday 3:00 P.M. to 5:00 P.M.	15-20	15-20	Assembly Building	Assembly Building
Soccer Practice and Games*	Monday through Friday 2:30 P.M. to 5:00 P.M. Saturday 9:00 A.M. to 5:00 P.M.	25 practices 50-60 games	25 practices 50-60 games	Sports Field	Sports Field
Baseball Practice and Games*	Monday through Friday 2:30 P.M. to 5:00 P.M. Saturday 9:00 A.M. to 5:00 P.M.	25-30 practice 50-60 games	50-60 practice 100-120 games	Sports Field	Sports Field
Basketball	Wednesday and Friday 5:00 P.M. to 8:00 P.M. Saturday 11:00 A.M. to 8:00 P.M.	20	40	Basketball Courts	Basketball Courts
Volleyball	Wednesday and Friday 5:00 P.M. to 8:00 P.M. Saturday 11:00 A.M. to 8:00 P.M.	20	40	Volleyball Courts	Volleyball Courts

*Two games and one practice game would occur on Saturdays (i.e., either two baseball games and one practice soccer game or one baseball game, one soccer game, and one practice baseball game) due to overlapping baseball and soccer fields in the southwest area of the Project site.

Source: (Project Applicant, 2018)



acreage of approximately 5.4 acres for the Project. The Project net acreage of 5.4 acres was then multiplied by the water demand factor of 5,000 gallons/net acre per day obtained from Table 4-1-2, which yielded a water demand of approximately 27,200.5 gallons per day (0.08 acre-feet per day) or 9,928,167.6 gallons per year (30.3 acre-feet per year).

D. Wastewater Treatment Demand

In order to calculate the quantity of wastewater that the Project would generate, wastewater generation rates were requested from LACSD. However, LACSD responded to the request stating that no wastewater generation rates are available that could be used to estimate wastewater generation for proposed developments within the LACSD (Lippert, 2017). Additionally, neither the San Bernardino County General Plan nor the San Bernardino County General Plan Final EIR contain wastewater generation rates that could be utilized to estimate the quantity of wastewater that would be generated by the Project. Table 4-2-1, *Sewer Generation Factors*, of the Water Agencies' Standards Design Guidelines for Water and Sewer Facilities, identifies a wastewater demand factor of 200 to 1,200 gallons per day (GPD) per gross acre for "Institutional" land uses, and a wastewater demand factor of 200 to 250 GPD per gross acre for residential land uses (WAS, 2014, Table 4-2-1). In order to calculate the total wastewater treatment demand for the Project, the most conservative institutional land use wastewater generation rate (1,200 GPD per gross acre) was multiplied by 3.8 acres (equivalent to the total acreage of the proposed development [27.12 acres] minus the acreage of the natural open space [13.5 acres] minus the acreage of the proposed on-site residence [0.034]), and the most conservative residential land use wastewater generation rate (250 GPD per gross acre) was multiplied by the acreage of the proposed on-site residence (0.034 acres). The resulting wastewater treatment demand values (16,279 GPD for the proposed church facilities and 8.5 GPD for the proposed on-site caretaker's residence) were added together to obtain the Project's total wastewater treatment demand value of 16,288 GPD, or 5.9 million gallons per year.

2.6 SUMMARY OF REQUESTED ACTIONS

The County of San Bernardino has primary approval responsibility for the proposed Project. As such, the County serves as the Lead Agency for this DREIR pursuant to CEQA Guidelines Section 15050. Accordingly, the County's Planning Commission will hold a public hearing to consider the Final Revised EIR and the Project's CUP. The Planning Commission will make advisory recommendations to the Board of Supervisors on whether to approve, approve with changes, or deny the proposed Project's CUP. The Board of Supervisors will consider the information contained in the Final Revised EIR and the EIR's Administrative Record in its decision-making processes and will approve or deny the Project's CUP. Upon approval or conditional approval of the above-described Project actions and upon certification of the Final Revised EIR by the Board of Supervisors, the County would conduct administrative reviews and grant subsequent permits and approvals to implement Project requirements and conditions of approval. A list of the primary actions under County jurisdiction is provided in Table 2-5, *Matrix of Project Approvals/Permits*.

2.7 RELATED ENVIRONMENTAL REVIEW AND CONSULTATION REQUIREMENTS

Subsequent to approval of CUP Application No. P201700270, additional discretionary actions may be necessary to implement the proposed Project. These include, but are not limited to, building permits, grading permits, encroachment permits/road improvements, drainage infrastructure improvements, water and sewer



infrastructure improvements, and storm water permit(s) (NPDES). Table 2-5 provides a summary of the agencies responsible for subsequent discretionary approvals associated with the Project. The required DREIR will cover all federal, state, and local government approvals which may be needed to construct or implement the Project, whether explicitly noted in Table 2-5 or not (CEQA Guidelines § 15124[d]).

Table 2-5 Matrix of Project Approvals/Permits

Public Agency	Approvals and Decisions
County of San Bernardino	
Proposed Project – San Bernardino County Discretionary Approvals	
San Bernardino Planning Commission	<ul style="list-style-type: none"> Provide recommendations to the San Bernardino County Board of Supervisors regarding certification of the Project's DREIR. Provide recommendations to the San Bernardino County Board of Supervisors whether to approve CUP No. P201700270.
San Bernardino Board of Supervisors	<ul style="list-style-type: none"> Reject or certify required DREIR along with appropriate CEQA Findings. Approve, conditionally approve, or deny the Conditional Use Permit No. P201700270.
Subsequent San Bernardino County Discretionary and Ministerial Approvals	
San Bernardino County Subsequent Implementing Approvals: Land Use Services Department Planning Division and/or Building & Safety	<ul style="list-style-type: none"> Approve implementing Final Maps, Plot Plans, and/or Site Plans as may be appropriate. Issue Grading Permits. Issue Building Permits. Approve Road Improvement Plans. Issue Encroachment Permits.
Other Agencies – Subsequent Approvals and Permits	
California Department of Transportation	<ul style="list-style-type: none"> Approve Road Improvement Plans. Issue Encroachment Permits.
California Department of Fish and Wildlife	<ul style="list-style-type: none"> Issuance of Incidental Take Permits, as may be appropriate. Section 1602 Streambed Alteration Agreement¹
State Water Resources Control Board	<ul style="list-style-type: none"> Approve NPDES Permit.
United States Army Corps of Engineers (USACE)	<ul style="list-style-type: none"> Clean Water Act (CWA) Section 404 permit¹

Notes:

¹ Indicates permits that would need to be obtained in the event that implementation of the Project occurs prior to completion of the Rimforest Storm Drain Project.



3.0 ENVIRONMENTAL ANALYSIS

3.1 SUMMARY OF DREIR SCOPE

In accordance with CEQA Guideline Sections 15126 to 15126.4, this DREIR Section 3.0, Environmental Analysis, provides analyses of potential direct, indirect, and cumulatively considerable impacts that could occur from planning, constructing, and operating the proposed Project.

In compliance with the procedural requirements of CEQA, an Initial Study was prepared to determine the scope of environmental analysis for the anticipated EIR. Public comment on the scope consisted of oral comments received at a public scoping meeting and written comments received by the County of San Bernardino in response to the NOP. Comments were provided by members of the public during the NOP comment period which began on February 14, 2005. Taking all known information obtained during the NOP comment period into consideration along with an evaluation of the currently-proposed version of the previous project on which the NOP was based, 10 primary environmental subject areas are evaluated in this Section 3.0, as listed below. Each subsection evaluates several specific subject matters related to the general topic of the subsection. The title of each subsection is not limiting; therefore, refer to each subsection for a full account of the subject matters addressed therein.

3.A Aesthetics	3.F Hydrology and Water Quality
3.B Air Quality	3.G Land Use and Planning
3.C Biological Resources	3.H Noise
3.D Geology and Soils	3.I Transportation / Circulation
3.E Hazards	3.J Greenhouse Gas Emissions

Eight (8) environmental subjects, agriculture resources, cultural resources, mineral resources, population and housing, public services, recreation, tribal cultural resources, and utilities and services systems, were determined by San Bernardino County to have no potential to be significantly impacted by the Project, as concluded by the Project's Initial Study (included in *Technical Appendix A* to this DREIR) and after consideration of all comments received by County of San Bernardino on the scope of this DREIR and documented in the County's administrative record. The subject of these nine environmental topics are discussed briefly in Section 5.0, *Other CEQA Considerations*.

3.1.1 SCOPE OF CUMULATIVE EFFECTS ANALYSIS

CEQA requires that an EIR contain an assessment of the cumulative impacts that may be associated with a proposed project. As noted in CEQA Guidelines Section 15130(a), "an EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable." "A cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects creating related impacts" (CEQA Guidelines Section 15130(a)(1)). As defined in CEQA Guidelines Section 15355:

'Cumulative Impacts' refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.



- (a) *The individual effects may be changes resulting from a single project or a number of separate projects.*
- (b) *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. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.*

CEQA Guidelines Section 15130(b) describes two acceptable methods for identifying a study area for purposes of conducting a cumulative impact analysis. These two approaches include: “1) 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 [‘the list of projects approach’], or 2) a summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact [‘the summary of projections approach’].”

The summary of projections approach is used in this DREIR, except for the evaluation of cumulative traffic and vehicular-related air quality, greenhouse gas, and noise impacts. The analysis of cumulative traffic impacts uses a combined approach, utilizing the summary of projections approach with the manual addition of past, present, and reasonably foreseeable projects that were not accounted for in the projections, where appropriate. This approach was determined to be appropriate by the County of San Bernardino because long-range planning documents contain a sufficient amount of information to enable an analysis of cumulative effects for all subject areas, with exception of traffic and vehicular-related air quality, greenhouse gas, and noise effects, which require a greater level of detailed study. The cumulative impact analyses of vehicular-related air quality, greenhouse gas, and noise impacts, which rely on data from the Project’s traffic study, inherently utilize the combined approach. With the combined approach, the cumulative impact analyses for the air quality, greenhouse gas, noise, and traffic issue areas overstate the Project’s (and Project-related components’) potential cumulative impacts as compared to an analysis that would rely solely on the list of projects approach or solely the summary of projections approach; therefore, the combined approach provides a conservative, “worst-case” analysis for cumulative air quality, greenhouse gas, noise, and traffic impacts.

The list of projects used to supplement the summary of projections approach for the cumulative traffic impact analysis (as well as vehicular-related air quality, greenhouse gas, and noise impact analyses) includes approved and pending development projects in proximity to the Project site that would contribute traffic to the same transportation facilities as the Project, as well as other projects in the study area that have the potential to affect regional transportation facilities. As such, the cumulative impact analysis of traffic and vehicular-related air quality, greenhouse gas, and noise impacts includes other past, present, and reasonably foreseeable projects within this study area in addition to the summary of projections (Translutions, Inc., 2018, Table C). This methodology recognizes development projects that have the potential to contribute measurable traffic to the same intersections, roadway segments, and/or state highway system facilities as the proposed Project and have the potential to be made fully operational in the foreseeable future. Specific development projects included in the traffic and vehicular-related air quality, greenhouse gas, and noise cumulative impact analyses are shown in Figure 1-1, *Related Projects Location*, and are listed in Table 3.0-1, *Cumulative Projects List*.



For the cumulative impact analyses that rely on the summary projections approach (i.e., all issue areas with the exception of traffic and vehicular-related air quality, greenhouse gas, and noise, as described in the preceding pages), the cumulative study area includes the unincorporated portion of San Bernardino County referred to as the Rimforest community. The Rimforest community has historically been used for rural uses, but has in recent decades been developed for residential and non-residential developments ranging from rural to higher densities. This study area exhibits similar characteristics in terms of climate, geology, and hydrology, and therefore is also likely to have similar biological and archaeological characteristics as well. This study area also encompasses the service areas of the Project site's primary public service and utility providers. Areas outside of this study area either exhibit topographic, climatological, or other environmental circumstances that differ from those of the Project area, or are simply too far from the proposed Project site to produce environmental effects that could be cumulatively considerable. Exceptions include cumulative air quality analysis, which considers the entire South Coast Air Basin (SCAB) and greenhouse gas emissions and associated global climate change, which potentially affect all areas of Earth. Additionally, the analysis of potential cumulative hydrology and water quality effects considers other development projects located within the boundary of the Santa Ana River Basin watershed.

Environmental impacts associated with buildout of the cumulative study area were evaluated in the General Plan EIR prepared for by San Bernardino County. The location where the General Plan EIR is available for review is provided below. The San Bernardino General Plan EIR is herein incorporated by reference pursuant to CEQA Guidelines Section 15150.

- County of San Bernardino General Plan EIR (SCH No. 2005101038) available for review at the County of San Bernardino, Land Use Services Department, 385 North Arrowhead Avenue #2, San Bernardino, California 92415;

Subsections 3.A to 3.J of this DREIR evaluate the ten environmental subjects warranting detailed analysis. The format of discussion is standardized as much as possible in each section for ease of review. The environmental setting is discussed first, followed by a discussion of the Project's (and Project-related components') potential environmental impacts based on specified thresholds of significance used as criteria to determine whether potential environmental effects are significant.



Table 3.0-1 Cumulative Projects List

#	Project/Location	Land Use	Quantity	Units
1	Santa's Village; east of Kuffel Canyon Road; north of SR-18	Theme Park	--	--
2	Single-Family Residential; southwest corner of Cumberland Drive and SR-173	Single Family Detached Housing	60	DU
3	Arrowhead Pine Rose Cabins; north of SR-189, west of Grandview Road	Cabin/Resort	--	--
4	Landscape Material Sales; 650 ft. north of SR-173 and Hook Creek Road	Nursery	1	AC
5	Retail; 550 ft. east of SR-18 and Kuffel Canyon Road	Shopping Center	4,684	TSF
6	Chapel; southeast corner of Clubhouse Drive and Lovers Lane	Church	1,995	TSF
7	Miniature Golf	Miniature Golf Course	9	Holes
8	Office Building; 26232 SR-18, Rimforest, CA	General Office Building	5	TSF
9	Boat Sales; 29163 Hook Creek Road, Cedar Glen, CA	Recreational Vehicle Sales	2,232	TSF
10	Cabins	Single Family Detached Housing	4	DU
11	Single-Family Residential	Single Family Detached Housing	1	DU

DU: Dwelling Units

TSF: Thousand Square Feet

Source: (Translutions, Inc., 2018, Table C)

The thresholds of significance used in this DREIR are based on the thresholds presented in CEQA Guidelines Appendix G and as applied by County of San Bernardino to create the Project's Initial Study Checklist (included in *Technical Appendix A* to this DREIR). The thresholds are intended to assist the reader of this DREIR in understanding how and why this DREIR reaches a conclusion that an impact would or would not occur, is significant, or is less than significant.

Serving as the CEQA Lead Agency for this DREIR, the County of San Bernardino is responsible for determining whether an adverse environmental effect identified in this DREIR should be classified as significant or less than significant. The standards of significance used in this DREIR are based on the independent judgment of the County of San Bernardino, taking into consideration CEQA Guidelines Appendix G, the San Bernardino County Development Code and adopted County policies, the judgment of the technical experts that prepared this DREIR's Technical Appendices, performance standards adopted, implemented, and monitored by regulatory agencies, significance standards recommended by regulatory agencies, and the standards in CEQA that trigger the preparation of an DREIR.

As required by CEQA Guidelines Section 15126.2(a), impacts are identified in this DREIR as direct, indirect, cumulative, short-term, long-term, on-site, and/or off-site impacts of the proposed Project and/or Project-related components. A summarized "impact statement" is provided in each subsection following the analysis. Each subsection also includes a discussion or listing of the applicable regulatory criteria (laws, policies,



regulations) that the Project and its implementing actions are required to comply with (if any). If impacts are identified as significant after mandatory compliance with regulatory criteria, feasible mitigation measures are presented that would either avoid the impact or reduce the magnitude of the impact. For any impact identified as significant and unavoidable, the County of San Bernardino would be required to adopt a statement of overriding considerations pursuant to CEQA Guidelines Section 15093 in order to approve the Project despite its significant impact(s) to the environment. The statement of overriding considerations would list the specific economic, legal, social, technological, and other benefits of the Project, supported by substantial evidence in the Project's administrative record, that outweigh the unavoidable impacts.



3.A AESTHETICS

This Subsection characterizes the existing aesthetic conditions at the Project site and discusses views of the Project site from surrounding vantage points. Potential visual and aesthetic changes that may result from Project implementation are analyzed. The resources relied upon to prepare this Subsection include analysis of aerial photography (Google Earth, imagery dated February 2016) (Google Earth Pro, 2016), and photographs taken in June 2017 by Focus 360, Inc. Information from the Project's Conditional Use Permit application was also used to prepare this Subsection (Project Applicant, 2018). This Subsection also is based on information contained in the San Bernardino General Plan (San Bernardino County, 2007a), and the California Department of Transportation (Caltrans) Scenic Highway Mapping System (Caltrans, n.d.).

3.A.1 ENVIRONMENTAL SETTING

3.A.1.1 EXISTING SITE CONDITIONS

The Project site is undeveloped and is characterized by gently rolling hills to steep mountain terrain that is largely covered by montane coniferous forest. The Project site includes a northeasterly trending valley that traverses its south-central portion and falls to the northeast. Elevations across the Project site vary slightly from approximately 5,400 feet above mean sea level (amsl) at the northeast corner of the Project site to 5,740 feet above amsl on the western edge of the Project site. A natural drainage course occurs on the southwest portion of the Project site. An abandoned groundwater well exists on the southwest portion of the Project site. Numerous unpaved dirt roads cross the Project site, which can be accessed via an unpaved dirt road off State Route 18 ("Rim of the World Highway"; SR-18) to the south of the Project site. The primary on-site dirt road traverses the southern portion of the Project site before turning northeasterly and paralleling the on-site valley and egressing from the north-central boundary of the Project site.

3.A.1.2 VISUAL SETTING

The Project site is a privately-owned property located within the San Bernardino National Forest and is located approximately 1.5 miles to the southwest of Lake Arrowhead. The Project site is generally bordered by SR-18 to the south, Daley Canyon Road to the east, undeveloped U.S. Forest Service land to the north, and Bear Springs Road and single-family residences to the west. Existing site conditions are depicted on Figure 2-5, *Aerial Photograph*, which demonstrates the Project site is primarily surrounded by forested undeveloped land, with approximately 25 to 65 feet of forested land between the Project boundary and the residential homes located to the west of the Project site. Due to the heavily forested condition of the Project site, visual access to the interior of the Project site from off-site areas is very limited.

3.A.1.3 SITE PHOTOGRAPHS

Motorists traveling in either direction along SR-18, between Bear Springs Road and Daley Canyon Road, would be the primary viewers of the Project site. Also, partially obstructed views to the site are available from distant residential properties to the west. As shown on Figure 3.A-1, *Representative Site Photos 1-3*, views from SR-18 toward the Project site primarily consist of densely forested and undeveloped land. The Project site visually consists of native trees, thick brush, and other vegetation of various heights and sizes. Groundcover visible from SR-18 generally comprises grassy vegetation, and rocky terrain. The topography



along the southern edge of Project site is characterized by steeply sloped hilly terrain, until just after the midpoint between Daley Canyon Road and Bear Springs Road. The remaining area along SR-18 adjacent to the Project site is typified by flatter terrain that quickly drops off from the highway toward the interior of the site. Traveling eastbound on SR-18, views are similar although somewhat broader due to the greater distance between the travel lane and the site. In summary, views toward the site along SR-18 contribute to the forested character and quality of views along this designated scenic route similar to other undeveloped forested land located along SR-18.

Views of the site from the single-family homes located upslope and to the west along Bear Springs Road are of forested land. The views encompass trees along the rear of the properties with forested areas extending across the site to the east. There is approximately 25 to 65 feet of vegetation between the 12 homes located along the Project site's western boundary as indicated on the Project's site plan dated April 25, 2017. Given the proximity of the homes and their higher elevation, trees on the site contribute to the scenic quality of mid- and long-range forest views to the east from the rear of the properties.

3.A.1.4 LIGHT AND GLARE

The Project site is currently undeveloped forested land. As such, the Project site does not produce light or glare. The surrounding SR-18, Daley Canyon Road, and Bear Springs Road are rural in nature and do not include streetlights, with the exception of the segments of these roadways that abut developed areas. However, headlights from passing vehicles along these roadways produce light and glare. Residential homes located immediately west of the Project site emit light via typical outdoor and security lighting fixtures.

3.A.1.5 SCENIC RESOURCES

According to Policy OS 5.1 of the San Bernardino County General Plan, the following criteria are considered for designation as scenic resources (San Bernardino County, 2007a, pp. VI-12 - VI-13):

- A roadway, vista point, or area that provides a vista of undisturbed natural areas;
- Includes a unique or unusual feature that comprises an important or dominant portion of the viewshed (the area within the field of view of the observer); and/or
- Offers a distant vista that provides relief from less attractive views of nearby features (such as views of mountain backdrops from urban areas).

Under existing conditions, the Project site is undeveloped and covered by montane coniferous forest. Public views of the Project site are primarily available from vehicles travelling along SR-18 to the immediate south of the Project site. However, due to the Project site's topography and dense forest vegetation community, views of the Project site from SR-18 are predominantly limited to trees and a small but steep forested hillside. Vehicles traveling along the segment of SR-18 located immediately south of the Project site have extensive unobstructed views of largely undeveloped areas of the San Bernardino National Forest and views of urbanized portions of the San Bernardino and San Gabriel valleys visible beyond when looking directly south, away from the Project site. The crest of the Santa Ana Mountain Range is also visible beyond the San Bernardino and San Gabriel Valleys for vehicular passengers traveling along SR-18 looking south, away from the Project site. The Project site is privately-owned property and, as such, does not provide public viewing points. Regardless, the Project site does not contain any roadways or vista points that provide vistas of undisturbed natural areas. No unique or unusual features occur on the Project site that comprise a dominant part of a viewshed; the on-



site trees and hillside visible from SR-18 are typical to the locale of the Project area. The areas immediately surrounding the Project site are characterized by mountainous forested terrain that are predominantly undeveloped with the exception of the sparsely developed residential land uses to the west of the Project site. Views of the Project site from surrounding areas are limited due to intervening topography and tree cover, with the most direct public views of the Project site available from SR-18 that abuts the Project site to the south.

3.A.1.6 SCENIC VISTAS

Scenic vistas are defined as undeveloped land that provides unobstructed views of unique natural features (i.e., mountains, hills, open spaces, and waterbodies) (San Bernardino County, 2007a, pp. III-6). However, the San Bernardino General Plan does not designate any scenic vistas within the County (San Bernardino County, 2007a, pp. III-6). Due to the topography in the immediate Project vicinity, public views of the Project site are mostly limited to views from vehicles traveling on SR-18 along the southern boundary of the Project site. Additionally, due to the topography and heavily vegetated nature of the Project site, existing views of the Project site from SR-18 are predominantly characterized by tree cover and a small steep hillside on the eastern half of the site. The on-site topography and vegetation screens views to the north beyond the Project site.

3.A.1.7 SCENIC BYWAYS/SCENIC HIGHWAYS

SR-18 abuts the southern Project boundary, and is designated as a Scenic Byway by the United States Forest Service (USFS). The segment of SR-18 that abuts the Project site is part of the 110-mile long Rim of the World Scenic Byway, which encompasses portions of California Highways 138, 18, and 38, and traverses the rim of the San Bernardino Mountains from Cajon Pass to San Geronio Pass (USDA, n.d.).

The segment of SR-18 that abuts the southern boundary of the Project site is also an Eligible State Scenic Highway. The Caltrans Scenic Highway Mapping System indicates that there are no officially designated State or County Scenic Highways in the vicinity of the Project site. (Caltrans, 2018)

3.A.1.8 SCENIC ROUTES

The segment of SR-18 that abuts the southern boundary of the Project site is designated as a Scenic Route in the County of San Bernardino General Plan Open Space Element (San Bernardino County, 2007a, p. VI-16). As further described below in the discussion of the General Plan Open Space Element, policies have been established by the County to promote scenic values along Scenic Highways, including evaluation of proposed developments within defined scenic corridors.

3.A.2 REGULATORY FRAMEWORK

3.A.2.1 REGIONAL

A. San Bernardino County Development Code

1. Glare and Outdoor Lighting

The County of San Bernardino encourages outdoor lighting practices that will minimize light pollution; conserve energy while maintaining nighttime safety and visibility; and curtail the degradation of the nighttime visual environment through implementation of the provisions in the Night Sky Protection Ordinance, which is



established in Chapter 83.07, *Glare and Outdoor Lighting*, of the County Development Code. The ordinance establishes shielding requirements for various light fixtures and applications, and is applicable to the Project.

2. *Sign Regulations*

Under Chapter 83.13, *Sign Regulations*, of the County Development Code, the County has established general sign regulations and additional standards and regulations for each land use zoning district. The standards are intended, in part, to enhance the appearance of the County, to encourage sound signage practices as a means of aiding businesses and providing information to the public, to prevent excessive and confusing light displays, and to reduce hazards to motorists and pedestrians.

B. San Bernardino County General Plan

The County of San Bernardino General Plan, which was adopted in 2007, includes applicable goals and policies within the Conservation Element and Open Space Element that address impacts to aesthetics are discussed below.

1. *Conservation Element*

The San Bernardino County General Plan Conservation Element goals and policies that are pertinent and applicable to the proposed Project (located within the Mountain Region of the General Plan) are identified as follows:

- M/CO 1** Preserve the unique environmental features of the Mountain Region including native wildlife, vegetation and scenic vistas.
- M/CO 5** Preserve the dark night sky as a natural resource in the Mountain Region communities.
- M/CO 1.2** Protect scenic vistas by minimizing ridgeline development that would substantially detract from the scenic quality of major ridgeline viewsheds.
- M/CO 5.3** Review exterior lighting as part of the design review process.
- M/CO 5.4** All outdoor lighting, including street lighting, shall be provided in accordance with the Night Sky Protection Ordinance and shall only be provided as necessary to meet safety standards.

2. *Open Space Element*

The following goals and policies of the General Plan Open Space Element applicable to the proposed Project are identified as follows:

- OS 4** The County will preserve and protect cultural resources throughout the County, including parks, areas of regional significance, and scenic, cultural and historic sites that contribute to a distinctive visual experience for visitors and quality of life for County residents.
- OS 5** The County will maintain and enhance the visual character of scenic routes in the County.
- OS 5.1** Features meeting the following criteria will be considered for designation as scenic resources:



- a. A roadway, vista point, or area that provides a vista of undisturbed natural areas.
- b. Includes a unique or unusual feature that comprises an important or dominant portion of the viewshed (the area within the field of the observer).
- c. Offers a distant vista that provides relief from less attractive views of nearby (such as views of mountain backdrops from urban areas).

OS 5.2 Define the scenic corridor on either side of the designated route, measured from the outside edge of the right-of-way, trail, or path. Development along scenic corridors will be required to demonstrate through visual analysis that proposed improvements are compatible with scenic qualities present.

OS 5.3 The County desires to retain the scenic character of visually important roadways throughout the County. A “scenic route” is a roadway that has scenic vistas and other scenic and aesthetic qualities that over time have been found to add beauty to the County. Therefore, the County designates the following route as [a] scenic highways and applies all applicable policies to development on [this] route:

Multiple Regions:

- d. State Route 18 from San Bernardino northeast to the City of Big Bear Lake; for Big Bear Lake northwest to Apple Valley; within the Victorville sphere of influence; and from Victorville and Adelanto to the Los Angeles County line.

3. Open Space Overlay

The County’s Open Space (OS) Overlay was created to strike a balance between the needs of an urbanizing County and the many uses, which require open lands. The OS Overlay seeks to preserve scenic resources and to provide the public additional opportunities to enjoy these scenic areas. According to the applicable OS Overlay map for the Valley and Mountain Areas of San Bernardino County, the Project site is not located within an OS Overlay (San Bernardino County, 2007c). The nearest OS Overlay to the Project site is Major Open Space Area #20, Strawberry Creek, which is located immediately west of the Project site and is classified as a Wildlife Corridor (San Bernardino County, 2007c).

3.A.2.2 LOCAL

A. Lake Arrowhead Community Plan

The Lake Arrowhead Community Plan (LACP) includes goals and policies that are refinements to those provided in the County General Plan and are generally designed to preserve the small-town mountain character of the Lake Arrowhead community. The LACP includes goals and policies within the Circulation and Infrastructure and Conservation elements that are relevant to the proposed Project, as discussed below.

1. Circulation and Infrastructure Element

The following circulation and infrastructure goals and policies from the LACP are applicable to the Project:



LA/CI 7 Ensure that infrastructure improvements are visually and physically compatible with the natural environment and mountain character of the community.

LA/CI 7.2 Mitigate the visual impacts of facilities, structures, utilities and mechanical installations through the development of appropriate screening and location criteria.

2. Conservation Element

The following goals and policies for conservation within the LACP are applicable to the aesthetics of the proposed Project:

LA/CO 1 Preserve the unique environmental features of Lake Arrowhead including native wildlife, vegetation, and scenic vistas.

LA/CO 1.3 Protect scenic vistas by minimizing ridgeline development that would substantially detract from the scenic quality of major ridgeline viewsheds.

3.A.3 THRESHOLDS OF SIGNIFICANCE

The following thresholds of significance provided in Section I of Appendix G to the CEQA Guidelines are used to determine the potential for significant aesthetic or light and glare impacts. The proposed Project would result in a significant impact to aesthetics if the Project or any Project-related component would:

- a. Have a substantial adverse effect on a scenic vista;*
- b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;*
- c. Substantially degrade the existing visual character or quality of the site and its surroundings; and/or*
- d. Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area.*

Thresholds a) through d) are taken directly from Appendix G of the State CEQA Guidelines. The use of these thresholds for the evaluation of Project-related impacts is intended to ensure that the proposed Project's impacts to aesthetic resources are appropriately evaluated and that feasible mitigation measures are applied for any impacts that are determined to be significant. Regarding the determination of significance under Threshold a), if a scenic vista(s) would be adversely affected as seen from a public viewing location(s), such as a public road, park, and/or other publicly-owned property at which the general public is known to use or congregate, the impact will be regarded as significant. Regarding the determination of significance under Threshold c), if the character or quality of the Rimforest area, including both publicly- and privately-owned properties, would be degraded, the impact will be regarded as significant. In this context, "degrade" will mean the introduction of physical features that would have a demonstratively inconsistent character and/or would be constructed with inferior design characteristics than currently found in the Rimforest area, based on the independent judgment of San Bernardino County.



3.A.4 IMPACT ANALYSIS

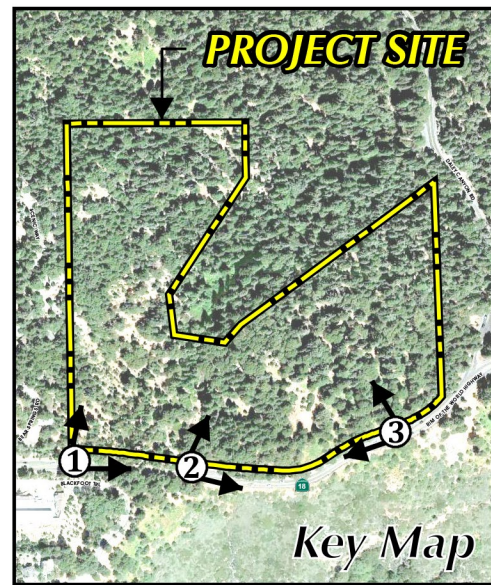
Threshold a) Would the Project have a substantial adverse effect on a scenic vista?

The County of San Bernardino General Plan does not designate any scenic vistas. Additionally, the Project site does not contain any designated scenic vistas and public views of the Project site are mostly limited to views from vehicles traveling along SR-18. Due to the topography and heavily vegetated nature of the Project site, views of the Project site from SR-18 are limited and characterized by tree cover and a small steep hillside on the eastern half of the portion of the site that fronts SR-18. As previously discussed, when looking southward, motorists traveling along the segment of SR-18 that abuts the southern Project boundary enjoy a view of the San Bernardino National Forest, portions of the San Bernardino Valley, and the crest of the Santa Ana Mountain Range. Although the County of San Bernardino General Plan does not designate any scenic vistas within or immediately adjacent to the Project site, the view south of the Project site toward these features in the distance would not be affected by the proposed development.

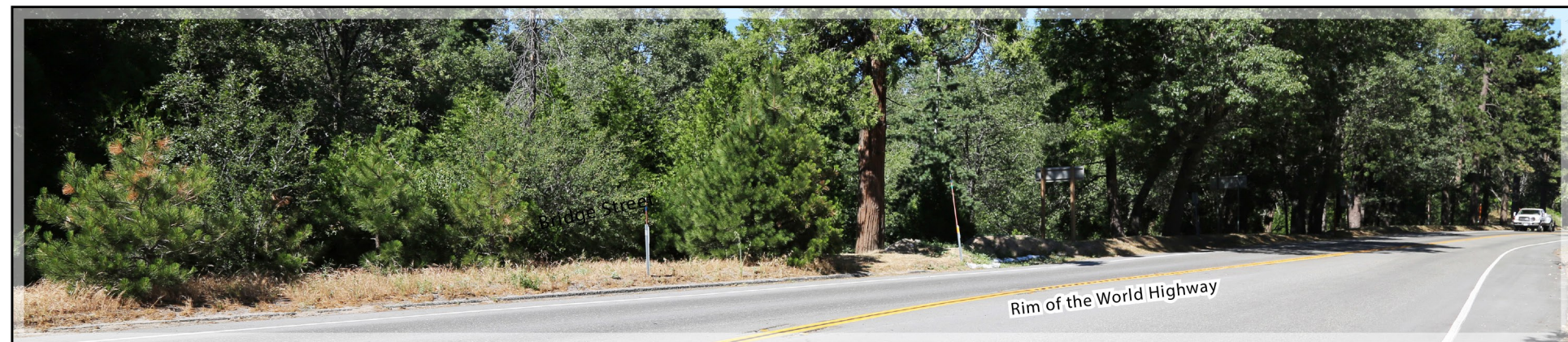
The Project site is located north of SR-18, and therefore development of the Project site with the proposed church structures, sports courts, sports field, landscaping, drainage facilities, internal roads, parking lots, and utility improvements would not obstruct scenic views toward the south from SR-18. In addition to proposed development on the Project site, the Project would require connections to existing off-site utility lines within SR-18, and would construct a signalized three-way intersection and driveway to provide access to the Project site from SR-18, and an unsignalized emergency access driveway from SR-18. With the exception of the proposed traffic signal, the Project's proposed road and utility improvements occurring within SR-18 would be at subsurface or at ground-level, and would not result in any permanent substantial impacts to the view south of SR-18. During the construction process, construction equipment would be used that may temporarily be visible from SR-18 when looking across toward the Project site. However, the use of such construction equipment would be temporary in duration and the equipment would be removed at the end of the construction period. The construction equipment that would be used at the Project site would not be of any substantive mass to block or substantially obscure a scenic view. Accordingly, there would be no substantial change to scenic views available to the public during the Project's construction, and impacts would be less than significant with regard to this topic.

As shown in Figure 3.A-1, *Representative Site Photos 1-3*, due to the existing intervening topography and tree cover that characterizes the Project site and its surroundings, views south of SR-18 are generally unavailable from the limited surrounding public view points around the Project site. Under existing conditions, the portions of Daily Canyon Road, SR-189 and other local roads that are located northeast and north of the Project site are situated at a lower elevation than the Project site, and therefore do not offer views of the scenic vista south of SR-18. Under existing conditions, intervening vegetation and tree cover also obstruct views of the scenic vista south of SR-18 that would be available from nearby public view points to the north and east of the Project site. Views of the scenic vista south of SR-18 from the public residential streets directly west of the Project site are predominantly oriented in a southerly direction, and would therefore not be substantially adversely affected by the development of the Church of the Woods Project on the Project site to the immediate east.

Based on the foregoing, the Project would result in less-than-significant impacts on scenic vistas.



North



Northeast

Location 1: From along Rim of the World Highway looking north to northeast.

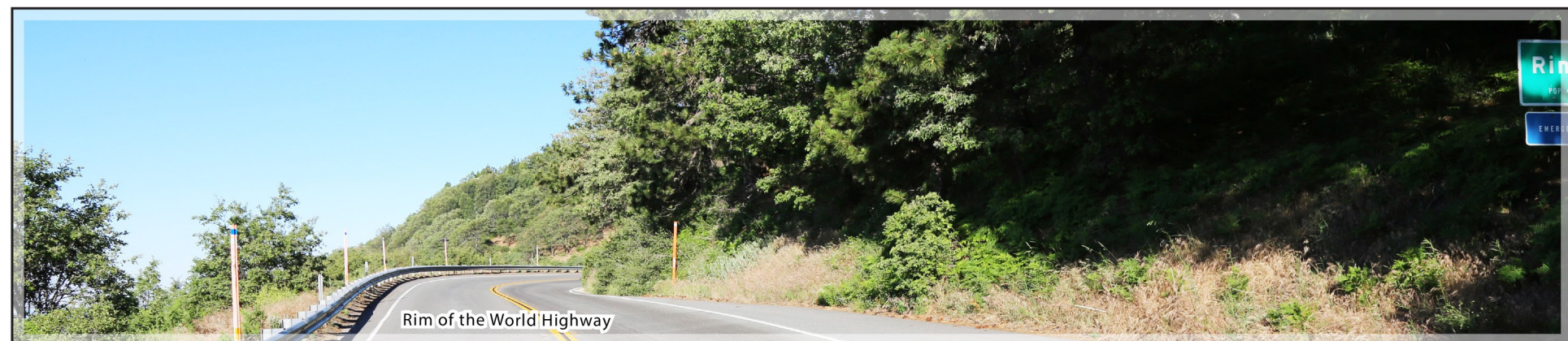
Northeast



East

Location 2: From along Rim of the World Highway looking northeast to east.

West

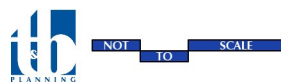


Northwest

Location 3: From along Rim of the World Highway looking west to northwest.

Source(s): Focus360 (10-13-2017)

Figure 3.A-1





Threshold b) Would the Project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

According to Policy OS 5.1 of the San Bernardino County General Plan, the following criteria will be considered for designation as scenic resources (San Bernardino County, 2007a, pp. VI-12 through VI-13):

- A roadway, vista point, or area that provides a vista of undisturbed natural areas;
- Includes a unique or unusual feature that comprises an important or dominant portion of the viewshed (the area within the field of view of the observer); and/or
- Offers a distant vista that provides relief from less attractive views of nearby features (such as views of mountain backdrops from urban areas).

Under existing conditions, the Project site is undeveloped, does not contain any rock outcroppings, and is covered by montane coniferous forest. Furthermore, because the Project site is undeveloped under existing condition, the Project site does not have the potential to contain any historic buildings. Public views of the interior of the Project site are primarily available from vehicles travelling along SR-18 to the immediate south of the Project site. However, due to the topography of the Project site and intervening on-site trees, views of the Project site from SR-18 are predominantly limited to trees and a small but steep forested hillside. Passengers in vehicles traveling along the segment of SR-18 located immediately south of the Project site can see sweeping views of largely undeveloped areas of the San Bernardino National Forest when looking directly south. When looking south and southwest from the segment of SR-18 that abuts the Project site, as depicted in Figure 3.A-1, portions of the urbanized San Bernardino and San Gabriel Valleys are visible beyond the San Bernardino National Forest. The crest of the Santa Ana Mountain Range is visible beyond the San Bernardino and San Gabriel Valleys. The Project site is private property and does not offer public views from on-site; regardless, the Project site does not contain any roadways or vista points that provide vistas of undisturbed natural areas. No unique or unusual features occur on the Project site that comprise a dominant part of a viewshed; the on-site trees and hillside visible from SR-18 are typical to the locale of the mountainous Project area. The areas immediately surrounding the Project site are characterized by mountainous forested terrain that is predominantly undeveloped with the exception of the sparsely developed residential land uses to the west of the Project site. Views of the Project site from surrounding areas is limited due to intervening topography and tree cover, with the most direct public views of the Project site available from SR-18 that abuts the Project site to the south. Accordingly, the Project site does not offer a distant vista that provides relief from less attractive views of nearby features. Based on the foregoing information, the Project site does not contain any scenic resources as they are defined in the Open Space Element of the San Bernardino County General Plan.

The Caltrans Scenic Highway Mapping System indicates that there are no officially designated State or County Scenic Highways in the vicinity of the Project site (Caltrans, 2018). The segment of SR-18 that abuts the southern boundary of the Project site is an Eligible State Scenic Highway, but is not an Officially Designated State Scenic Highway. The segment of SR-18 that abuts the Project site has been designated as a Scenic Byway by the USFS, and is part of the 110-mile long Rim of the World Scenic Byway. Development of the Project and its associated improvements to SR-18 would result in the removal of approximately 50% existing on-site trees and vegetation. As discussed above, based on the definition of scenic resources that is provided in the Open Space Element of the San Bernardino County General Plan, the Project site consists of forested slopes that are similar to other properties throughout the San Bernardino Mountains and does not contain any



designated scenic resources. Therefore, implementation of the Project would not substantially damage any scenic resources. Accordingly, no impact would occur with respect to scenic resources.

Threshold c) Would the Project substantially degrade the existing visual character or quality of the site and its surroundings?

1. Short-Term Project Construction

During construction of the Project, grading activities would remove approximately 50% of the existing on-site trees and vegetation. The Project would require grading that would entail the removal of native vegetation and alteration of the site's natural topography. More specifically, grading of the Project site would include clearing/grubbing, sub-drain construction, erosion control, and finish grading in the southern and central portions of the Project site. Additionally, the Project would include the construction of utilities, internal roads, and improvements to SR-18 (signalized three-way intersection and emergency access lane); the sequential construction of church facility buildings, athletic field, sports courts, and parking lots; and the provision of landscaping and other site improvements. Heavy equipment and construction crews would temporarily operate at the Project site during Project construction activities for approximately 18 months. Stockpiled soils, equipment, and/or building materials would be partially visible from the surrounding off-site areas, including passing motorists along SR-18. Construction equipment would be partially screened from the residential neighborhood located immediately west of the Project site by the dense undeveloped forest land located in the eastern portion of the Project site. Following completion of the construction activities, all construction equipment would be removed from the site. As described in DREIR Subsection 2.5.2, *Equipment Staging*, the Project would also maintain a 150-foot setback between the SR-18 right-of-way (ROW), northern half of the proposed sports field, and construction equipment, soil stockpiles, and staging areas. The area within the 150-foot setback would remain in an undisturbed condition throughout the construction period. Further, the presence of construction and construction activities is common throughout southern California and, as such, the presence of construction equipment is common and not considered a degradation of the visual character. Project-related changes to local visual character and quality during Project construction would be less than significant due to the temporary nature of construction activities, the location of dense forest between the construction area and existing residences and because the Project would maintain a 150-foot setback between the SR-18 ROW and construction equipment, soil stockpiles, and staging areas.

2. Long-Term Project Operation

Following the completion of construction, the developed Project site would be changed from predominantly undisturbed forested land to one with church facility buildings, athletic field, sports courts, internal roadways, driveways, drive aisles, parking lots, landscaping, and drainage facilities (refer to Figure 2-7, *Proposed Site Plan*). Views towards the Project site from the residential neighborhood located immediately west of the Project site would likely experience minor changes in visual character; however, views of the Project site from the neighborhood would be largely screened or fragmented due to the dense intervening tree and vegetative cover. The proposed Project would include a minimum separation of 100 feet of existing coniferous forest and natural vegetation, as well as landscaped manufactured slopes between the Project site and the residential areas to the west. Therefore, looking west towards the Project site from the residential streets to the west, the existing uninterrupted views of forest and vegetation (with only fragmented views through the trees of the Project site) would largely be unchanged as a result of Project implementation.



Implementation of the Project would alter views of the Project site as seen along the SR-18 corridor (looking northward). As further described below, views of relatively undisturbed forested land looking north would be altered by the construction of a three-way signalized intersection (at the SR-18/proposed Project Driveway intersection), emergency access driveway (east of the proposed Project Driveway) and parking areas, buildings, and an athletic field interior to the Project site, visible to some degree through a variable width setback with introduced landscaping. The landform of the Project site as viewed from the highway would also be altered, particularly in the central portion of the site where a section of the existing slope would be graded.

Figure 3.A-2, *Existing vs. Simulated Project Site Views- Location 1*, depicts the existing views and illustrates the anticipated views of the southwest corner of the Project site, while traveling east along SR-18 looking north. As shown in the *existing* image, this portion of the Project site contains dense forest and does not provide internal views of the Project site. The development of the Project would result in modifications to the existing visual character of the Project site from this portion of SR-18. Approximately 50% of the Project site would be converted from an undeveloped forested area to a developed site. The remaining 50% of the Project site would prevail as undeveloped open space. As shown in the *simulated* image, the existing visible trees, vegetation, and groundcover found on-site would be removed to accommodate the athletic field, displayed in the simulation's foreground. Portions of the Project's proposed assembly building would be visible from this section of SR-18. A six-foot high tubular steel fence would be erected along the length of the athletic field's southern perimeter. Views of the athletic field, the proposed assembly building, and other improvements would be partially screened by ornamental trees and vegetation that would be planted within an approximate 50-foot setback between the curb along SR-18 and the southern perimeter of the athletic field. Over time, and depending on the rate of growth of plantings in this area, the views from SR-18 to the proposed assembly building and the interior of the Project site would be partially screened. Moreover, views of the on-site forest vegetation community would still be available from this viewing location. As demonstrated in Figure 3.A-2, the Project is designed to blend the proposed building in with the surrounding forest vegetation to facilitate the preservation of the Project site's existing visual character. Additionally, the Project's conceptual landscaping plan includes vegetation that would complement the existing plant communities found on-site and secure the integrity of the Project site's visual character. Therefore, implementation of the Project would not result in substantial physical degradation of the existing character and/or quality of the Project site from this viewing location and impacts would be less than significant.

Figure 3.A-3, *Existing vs. Simulated Project Site Views- Location 2*, depicts the existing northeasterly views from SR-18 and illustrates the anticipated northeasterly views of the entrance to the Project site. As shown in the *existing* image, the location of the Project site entrance is fairly open and contains vegetation, forest cover, and a concave in topography immediately north of SR-18. Additionally, the existing conditions give partial views of the central area of the Project site and internal hillsides. As shown in the *simulated* image, the development of this portion of the Project site would include the removal of existing trees and vegetation; the construction of a driveway, parking, and sidewalks; the installation of a traffic signal and street lighting; filling the concaved portion of the site up to highway elevation; the installation and landscaping of a median; and the development of a landscaped setback area along SR-18. Although not depicted in the visual simulation, Project monumentation signage and two retaining walls up to ten feet high would also be constructed at the Project site's entrance. From this viewing location, the Project would convert the existing view of the Project site from an undeveloped forested area to a developed site. As demonstrated in Figure 3.A-3, the proposed assembly building would be partially visible from this viewing location; however, building's color scheme

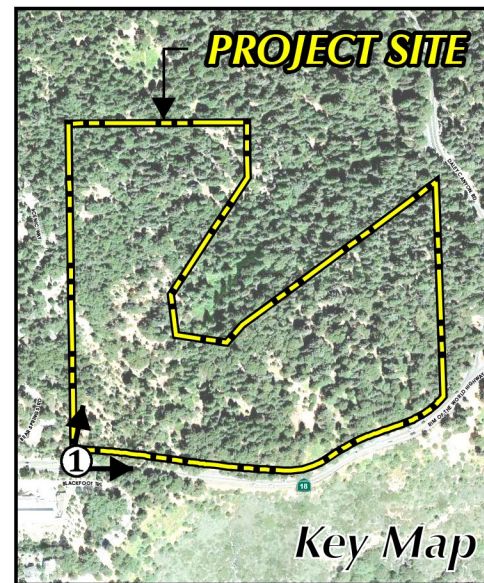


would allow the building to blend in with and screened by the on-site ornamental landscaping. Implementation of the Project would still provide partial views of the central area of the Project site and internal hillsides. As stated above, the Project would incorporate architectural designs, color scheme, and landscaping that would complement the Project site's visual character. Therefore, implementation of the Project would not result in substantial physical degradation of the existing character and/or quality of the Project site from this viewing location and impacts would be less than significant.

Figure 3.A-4, *Existing vs. Simulated Project Site Views- Location 3*, depicts the existing northwesterly views and illustrates the anticipated northwesterly views from SR-18. As shown in the *existing* image, the topography in this portion of the site is characterized by steep, forested terrain. Internal views of the Project site are not visible from this viewing location. From this viewing location, the Project would convert undeveloped forest land to a developed site. As shown in the *simulated* image, grading in this portion of the site, would involve substantial excavation and removal of existing of trees, shrubs, and other vegetation. A gravel shoulder (not depicted) would be provided along this section of the highway in conformance with Caltrans requirements. Landscaping would be provided in the adjacent slope and open space areas north of SR-18. A paved fire road between 26 and 30 feet in width and proposed intersection of an emergency access driveway would be visible from the highway, which would be used for emergency egress only. The loss of a forested hillside and the potential visibility of the fire road and retaining wall present a sharp contrast from the existing view of this area of the site. Although the Project would result in a sharp contrast in views in this viewing location, as demonstrated in the visual demonstration, the Project would incorporate landscaping and a color scheme that would complement the visual character and blend the Project in with surrounding area. Additionally, internal views of the Project site would still not be visible from this viewing location. Implementation of the Project would result in stark modifications to the view of the Project site from this viewing location; however, the modifications would not result in the degradation of the visual character and/or quality of the Project site and impacts would be less than significant.



EXISTING

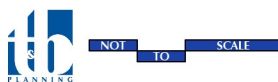


SIMULATED



Source(s): Focus360 (10-13-2017)

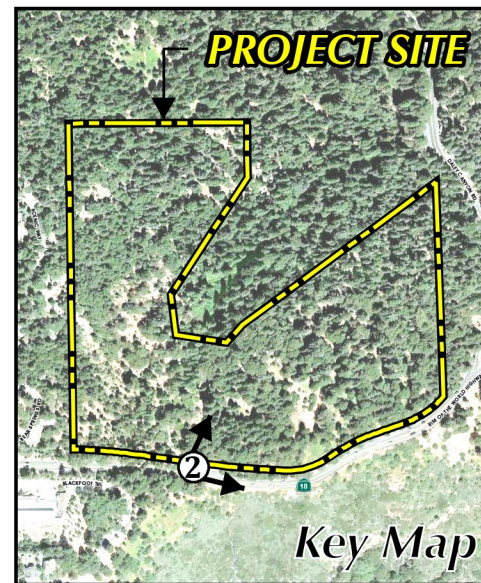
Figure 3.A-2



EXISTING VS. SIMULATED PROJECT SITE VIEWS - LOCATION 1



EXISTING

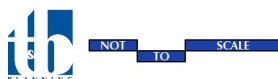


SIMULATED



Source(s): Focus360 (10-13-2017)

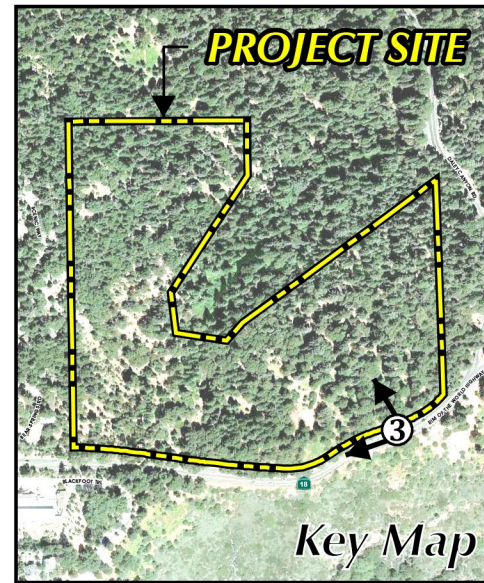
Figure 3.A-3



EXISTING VS. SIMULATED PROJECT SITE VIEWS - LOCATION 2



EXISTING

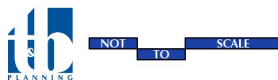


SIMULATED



Source(s): Focus360 (10-13-2017)

Figure 3.A-4



EXISTING VS. SIMULATED PROJECT SITE VIEWS - LOCATION 3



Threshold d) Would the Project create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?

The Project would introduce new sources of light and glare to the Project area including street lighting, security lighting, and light generated by the church facility buildings. In accordance with Chapter 83.07, *Glare and Outdoor Lighting*, of the County Development Code, lighting at the site is required be shielded to restrict glare and address issues such as “sky glow” (luminance in the atmosphere caused by dust, water vapor, and other particles that reflect and scatter any stray lighting that is reflected or emitted into the atmosphere) and “light trespass” or “light spillover” (any form of artificial illuminance emanating from a light fixture or illuminated sign that penetrates other property and creates a nuisance). Outdoor pole lighting would be installed along the internal driveways of the site and in parking areas. Security lighting, installed at building entrances and along walkways, would provide low-intensity illumination during evening and nighttime hours. Outdoor lighting would be required to be shielded. Any lighting used in landscaping would be low-level and downward facing. The sports courts and athletic field would not be illuminated at night. Light emanating from on-site buildings and parking areas would be visible from SR-18. However, because the Project would not introduce any substantial sources of lighting (such as athletic field lighting or other large light sources), and because lighting would be required to comply with County of San Bernardino outdoor lighting requirements per Chapter 83.07 of the County Development Code, lighting would not be substantial and impacts associated with light would be less than significant.

Glare is an occurrence predominantly caused by reflective materials during daytime hours and by automobile headlights in evening hours. The proposed Project would introduce limited sources of glare at the Project site, including potentially reflective building materials such as glass windows. However, the proposed Project does not include any components that would include large expanses of reflective materials that would result in the generation of substantial amounts of glare. Moreover, proposed walls, fences, and landscaping located along the Project site’s southern and eastern boundary would screen potential sources of glare from affecting nearby motorists and/or residents. Accordingly, a less-than-significant daytime glare impact would occur. Glare associated with automobile headlights would be limited to cars entering, exiting, or parking at the Project site in the nighttime hours. Depending on the locations of the moving cars on site relative to SR-18, headlights may be visible from the roadway. However, there are no individuals who are susceptible to the adverse effects of light pollution, sensitive receptors (e.g., residential neighborhood), located immediately south of the Project site and, as such, no impacts would occur as a result of the ingress and egress of vehicles to and from the Project site. The effects of headlights from the Project’s internal driveways and parking areas would be less than significant, as the nearest sensitive receptors are the residential properties directly the west of the site, which would remain elevated above the finished grade at the Project site. Additionally, the open space located immediately east of the residential neighborhood would screen glare associated with headlights of vehicles traveling along the Project’s internal driveways.

Based on the foregoing, and the Project’s compliance with the requirements of Chapter 83.07, *Glare and Outdoor Lighting*, of the County Development Code, the Project’s light and glare impacts would be less than significant.



3.A.5 CUMULATIVE IMPACTS

For purposes of analysis herein, the Project's cumulative study area for aesthetics comprises all areas visible from and visible to the Project site. Existing and planned development located outside the Project's viewshed have no potential to cumulatively contribute to visual quality effects.

As discussed under Threshold a, the County of San Bernardino General Plan does not designate any scenic vistas, and the Project would therefore not result in substantial adverse effects to any County designated scenic vistas. The segment of SR-18 that abuts the southern boundary of the Project site offers passing motorists distant views south of the Project site that consists of a view of the San Bernardino National Forest and San Bernardino Valley. The Project site is located north of SR-18, and therefore the Project would not obstruct or otherwise degrade passing motorists' views of distant south-facing viewpoints from SR-18. Since the General Plan does not designate any scenic vistas within the Project area, there is no potential for the Project's less-than-significant direct impacts to designated scenic vistas to be cumulatively considerable when viewed in connection with the effects of past, current projects, or probable future projects within its cumulative study area. Accordingly, the Project's impacts on scenic vistas would be less than cumulatively considerable.

As noted under the analysis of Threshold b, the Project site does not contain any scenic resources as defined in the Open Space Element of the San Bernardino County General Plan. There are no Officially Designated State or County Scenic Highways in the vicinity of the Project site; however, the segment of SR-18 that abuts the southern boundary of the Project site is an Eligible State Scenic Highway, and is also designated as a Scenic Byway by the USFS. The Project site would result in less-than-significant impacts to scenic resources, and therefore could not contribute to a cumulatively considerable impact on scenic resources when viewed in connection with the effects of past, current projects, or probable future projects within its cumulative study area.

As discussed under Threshold c, the Project would result in temporary less-than-significant impacts to local visual character and quality during Project construction due to the presence of construction equipment, stockpiled soils, and/or building materials that may be temporarily visible at the Project site from nearby public viewpoints. Long-term effects would entail a change in the landscape from undisturbed and undeveloped land to partial views of a two-story church facility building, athletic field, sports courts, internal driveways, drive aisles, parking lots, landscaping, and drainage facilities. As such implementation of the Project would alter views of the Project site looking north from the SR-18 corridor. However, the implementation of the Project's proposed architectural and landscaping components would complement the Project area's existing visual character and ensure that the Project would not result in a cumulatively considerable visual impact.

As noted under the analysis of Threshold d, the Project would be required to comply with the requirements in Chapter 83.07, *Glare and Outdoor Lighting*, of the County Development Code, which regulates outdoor lighting to ensure light sources are sufficiently shielded to prevent light pollution, glare, and light trespass. Cumulative development projects within the Project's cumulative study area would also be required to comply with the applicable requirements of Chapter 83.07 of the County Development Code related to sources of light and glare. Therefore, the Project would have less than cumulatively considerable light and glare impacts.



3.A.6 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION

Threshold a: Less-than-Significant Impact. The County of San Bernardino does not designate any scenic vistas within or immediately adjacent to the Project site. Therefore, development of the proposed Project would not have a substantial adverse effect on a designated scenic vista. Impacts are considered less-than-significant.

Threshold b: Less-than-Significant Impact. The Project site does not contain any scenic resources as defined in the Open Space element of the San Bernardino County General Plan. Additionally, the Caltrans Scenic Highway Mapping System does not identify any officially designated State or Count Scenic Highways in the Project site's vicinity. Accordingly, implementation of the Project would not substantially damage any scenic resources. Impacts are considered less-than-significant.

Threshold c: Less-than-Significant Impact. Project construction would result in temporary, short-term changes to the Project site's visual character. Following the completion of construction activities, all construction equipment would be removed from the site. Project construction-related impacts to local visual character is considered less-than-significant. Implementation of the Project would alter views of the Project site along SR-18 by changing undisturbed forested land to developed land with ornamental landscaping. The developed Project would not substantially physically degrade the existing character or quality of the Project site. Impacts are considered less-than-significant.

Threshold d: Less-than-Significant Impact. The Project would not introduce any substantial sources of lighting and would be required to comply with the County of San Bernardino's lighting requirements. Additionally, the Project does not include large expanses of reflective material and would only introduce limited sources of glare at the Project site. Proposed walls, fences, and landscaping would screen potential sources of glare. The Project would not create a new source of substantial light or glare. Impacts are considered less-than-significant.

3.A.7 MITIGATION

3.A.7.1 APPLICABLE COUNTY REGULATIONS AND DESIGN REQUIREMENTS

The following are applicable regulations and design requirements that will be imposed on the Project by San Bernardino County pursuant to the County's Development Code. Although these requirements technically do not meet CEQA's definition for mitigation because they are regulatory requirements, they are specified herein to document required Project compliance with applicable County regulations.

- The Project is required to comply with County Development Code (i.e., requirements of Chapter 83.02, *General Development and Use Standards*).
- The Project is required to comply with Chapter 83.10, *Landscaping Standards*, of the San Bernardino County Development Code. At a minimum, the Project shall comply with the screening and buffering requirements established in Section 83.02.060 of the County Development Code.



- The Project is required to adequately screen all proposed rooftop mechanical equipment in accordance with the requirements of Section 83.02.060, *Screening and Buffering*, of the San Bernardino County Development Code.
- The Project is required to comply with the standards established in Chapter 83.13, *Sign Regulations*, of the County Development Code. Additionally, any illumination of proposed signage shall comply with the applicable requirements established in Chapter 83.07, *Glare and Outdoor Lighting*, so as to avoid light pollution, light trespass, and glare.

3.A.7.2 MITIGATION MEASURES

The Project would result in less-than-significant environmental impacts related to aesthetics. Therefore, no mitigation measures are required.



3.B AIR QUALITY

This Subsection provides a discussion of existing air quality within the region and the Project area and analyzes potential impacts associated with implementation of the proposed Project. Potential short-term and long-term air quality emissions associated with the proposed Project are assessed with respect to federal and State ambient air quality standards and local agency rules and regulations. The analysis in this Subsection is based on a report prepared by HDR, Inc. titled “Air Quality and Greenhouse Gas Analysis” dated April 2018 and is included as *Technical Appendix B* to this DREIR.

3.B.1 ENVIRONMENTAL SETTING

3.B.1.1 AIR BASIN

The Project site is located in the South Coast Air Basin (SCAB, or “Basin”), which is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The SCAB encompasses approximately 6,745 square miles and includes portions of Los Angeles, Riverside, and San Bernardino Counties, and all of Orange County. The SCAB is bound by the Pacific Ocean to the west; the San Gabriel, San Bernardino, and the Jacinto Mountains to the north and east, respectively; and the San Diego County line to the south. (AQMD, 2013)

3.B.1.2 REGIONAL CLIMATE AND METHODOLOGY

The regional climate – temperature, wind, humidity, precipitation, and the amount of sunshine – has a substantial influence on air quality. The distinctive climate of the SCAB is determined by its terrain and geographical location, which comprises a coastal plain connected to broad valleys and low hills bounded by the Pacific Ocean in the southwest quadrant with high mountains forming the remainder of the perimeter. The annual average temperatures throughout the SCAB vary from the low to middle 60s, measured in degrees Fahrenheit (F). Inland areas of the SCAB, including where the Project site is located at a higher elevation than the coastal plane, show more variability in annual minimum and maximum temperatures than coastal areas within the SCAB due to a decreased marine influence. (HDR, 2018, p. 22)

The climate of the SCAB is characterized as semi-arid; however, the air near the land surface is quite moist on most days because of the presence of a marine layer. This shallow layer of sea air is an important modifier of SCAB climate. Humidity restricts visibility in the SCAB and the relative high humidity heightens the conversion of sulfur dioxide to sulfates. The marine layer provides an environment for that conversion process, especially during the spring and summer months. The annual average relative humidity within the SCAB is 71% along the coast and 59% inland. (HDR, 2018, p. 22)

More than 90% of the SCAB’s rainfall occurs from November through April. The annual average rainfall varies from approximately nine inches in Riverside to 14 inches in downtown Los Angeles. Monthly and yearly rainfall totals are extremely variable. Summer rainfall usually consists of widely scattered thunderstorms near the coast and slightly heavier shower activity in the eastern portion of the SCAB with frequency being higher near the coast. Due to its generally clear weather, about three-quarters of available sunshine is received in the SCAB. The remaining one-quarter is absorbed by clouds. The ultraviolet portion of this abundant radiation is a key factor in photochemical reactions. (HDR, 2018, pp. 22-23)



Dominant airflow direction and speed are the driving mechanisms for transport and dispersion of air pollution. During the late autumn to early spring rainy season, the SCAB is subjected to wind flows associated with storms moving through the region from the northwest. This period also brings five to 10 periods of strong, dry offshore winds, locally termed “Santa Anas” each year. During the dry season, which coincides with the months of maximum photochemical smog concentrations, the wind flow is bimodal, typified by a daytime onshore sea breeze and a nighttime offshore drainage wind. Summer wind flows are created by the pressure differences between the relatively cold ocean and the unevenly heated and cooled land surfaces that modify the general northwesterly wind circulation over southern California. During the nighttime, heavy, cool air descends mountain slopes and flows through the mountain passes and canyons as it follows the lowering terrain toward the ocean. (HDR, 2018, p. 23)

In the SCAB, there are two distinct temperature inversion structures that control vertical mixing of air pollution. During the summer, warm high-pressure descending (subsiding) air is undercut by a shallow layer of cool marine air. The boundary between these two layers of air is a persistent marine subsidence/inversion. This boundary prevents vertical mixing which effectively acts as an impervious lid to pollutants over the entire SCAB. The mixing height for the inversion structure is normally situated 1,000 to 1,500 feet above mean sea level. A second inversion-type forms in conjunction with the drainage of cool air off of the surrounding mountains at night followed by the seaward drift of this pool of cool air. The top of this layer forms a sharp boundary with the warmer air aloft and creates nocturnal radiation inversions. These inversions occur primarily in the winter, when nights are longer and onshore flow is weakest. They are typically only a few hundred feet above mean sea level. These inversions effectively trap pollutants, such as nitrogen oxides and carbon monoxide, as the pool of cool air drifts seaward. Winter is therefore a period of high levels of primary pollutants along the coastline. (HDR, 2018, p. 23)

3.B.1.3 AIR QUALITY POLLUTANTS AND ASSOCIATED HEALTH EFFECTS

The federal government and State of California have established maximum permissible concentrations for common air pollutants that may pose a risk to human health or would otherwise degrade air quality and adversely affect the environment. These regulated air pollutants are referred to as “criteria pollutants.” An overview of the common criteria air pollutants in the SCAB, their sources, and associated effects to human health are summarized on the following pages (refer also to Section 3.2 of *Technical Appendix B*).

- **Carbon Monoxide (CO)** is a colorless, odorless gas produced by the incomplete combustion of carbon-containing fuels, such as gasoline or wood. CO concentrations tend to be the highest in the winter during the morning, when little to no wind and surface-based inversions trap the pollutant at ground levels. CO is emitted directly from internal combustion engines; therefore, motor vehicles operating at slow speeds are the primary source of CO in the SCAB. The highest ambient CO concentrations are generally found near congested transportation corridors and intersections. Inhaled CO has no direct toxic effect on the lungs, but exerts its effect on tissues by interfering with oxygen transport and competing with oxygen to combine with hemoglobin present in the blood to form carboxyhemoglobin (COHb). Therefore, conditions with an increased demand for oxygen supply can be adversely affected by exposure to CO. The most common symptoms associated with CO poisoning include headache, nausea, vomiting, dizziness, fatigue, and weakness. Individuals most at risk to the



effects of CO include fetuses, patients with diseases involving heart and blood vessels, and patients with chronic oxygen deficiency. (HDR, 2018, p. 24)

- **Sulfur Dioxide (SO₂)** is a colorless gas or liquid. SO₂ enters the atmosphere as a pollutant mainly as a result of burning high sulfur-content fuel oils and coal and from chemical processes occurring at chemical plants and refineries. When SO₂ oxidizes in the atmosphere, it forms sulfates (SO₄). Collectively, these pollutants are referred to as sulfur oxides (SO_x). SO₂ is a respiratory irritant to people afflicted with asthma. After a few minutes' exposure to low levels of SO₂, asthma sufferers can experience breathing difficulties, including airway constriction and reduction in breathing capacity. Although healthy individuals do not exhibit similar acute breathing difficulties in response to SO₂ exposure at low levels, animal studies suggest that very high levels of exposure can cause lung edema (fluid accumulation), lung tissue damage, and sloughing off of cells lining the respiratory tract. (HDR, 2018, p. 26)
- **Nitrogen Oxides (NO_x)** consist of nitric oxide (NO), nitrogen dioxide (NO₂) and nitrous oxide (N₂O) and are formed when nitrogen (N₂) combines with oxygen (O₂). Their lifespan in the atmosphere ranges from one to seven days for nitric oxide and nitrogen dioxide, to 170 years for nitrous oxide. Nitrogen oxides are typically created during combustion processes, and are major contributors to smog formation and acid deposition. NO₂ is a criteria air pollutant, and may result in numerous adverse health effects; it absorbs blue light, resulting in a brownish-red cast to the atmosphere, and reduced visibility. Of the nitrogen oxide compounds, NO₂ is the most abundant in the atmosphere. As ambient concentrations of NO₂ are related to traffic density, commuters in heavy traffic may be exposed to higher concentrations of NO₂ than those indicated by regional monitoring stations. Population-based studies suggest that an increase in acute respiratory illness, including infections and respiratory symptoms in children (not infants), is associated with long-term exposure to NO₂. Short-term exposure to NO₂ can result in resistance to air flow and airway contraction in healthy subjects. Exposure to NO₂ can result decreases in lung functions in individuals with asthma or chronic obstructive pulmonary diseases (e.g., chronic bronchitis, emphysema), as these individuals are more susceptible to the effects of NO_x than healthy individuals. (HDR, 2018, p. 24)
- **Ozone (O₃)** is a highly reactive and unstable gas that is formed when volatile organic compounds (VOCs) and NO_x, both byproducts of internal combustion engine exhaust, undergo slow photochemical reactions in the presence of sunlight. Ozone concentrations are generally highest during the summer months when direct sunlight, warm temperatures, and light wind conditions are favorable to the formation of this pollutant. Short-term exposure (lasting for a few hours) to ozone at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes. Individuals exercising outdoors, children, and people with preexisting lung disease, such as asthma and chronic pulmonary lung disease, are considered to be the most susceptible sub-groups for ozone effects. An increased risk for asthma has been found in children who participate in multiple sports and live in communities with high ozone levels. (HDR, 2018, p. 24)



- **Particulate Matter less than 10 microns (PM₁₀)** is an air pollutant consisting of tiny solid or liquid particles of soot, dust, smoke, fumes, and aerosols. The size of the particles (10 microns or smaller, about 0.0004 inches or less) allows them to enter the lungs where they may be deposited, resulting in the adverse health effects discussed below for PM_{2.5}. PM₁₀ also causes visibility reduction. (HDR, 2018, p. 26)
- **Particulate Matter less than 2.5 microns (PM_{2.5})** is a similar air pollutant to PM₁₀ consisting of tiny solid or liquid particles which are 2.5 microns or smaller (which is often referred to as fine particles). These particles are formed in the atmosphere from primary gaseous emissions that include sulfates formed from SO₂ release from power plants and industrial facilities and nitrates that are formed from NO_x release from power plants, automobiles and other types of combustion sources. The chemical composition of fine particles is highly dependent on location, time of year, and weather conditions. Elevated ambient concentrations of fine particulate matter (PM₁₀ and PM_{2.5}) have been linked to an increase in respiratory infections, number, and severity of asthma attacks, and increased hospital admissions. Some studies have reported an association between long-term exposure to air pollution dominated by fine particles and increased mortality, reduction in life-span, and an increased mortality from lung cancer. Daily fluctuations in PM_{2.5} concentration levels have also been related to hospital admissions for acute respiratory conditions in children, to a decrease in respiratory lung volumes in normal children, and to increased medication use in children and adults with asthma. Recent studies show lung function growth in children is reduced with long-term exposure to particulate matter. The elderly, people with pre-existing respiratory or cardiovascular disease, and children, appear to be more susceptible to the effects of high levels of PM₁₀ and PM_{2.5}. (HDR, 2018, p. 26)
- **Volatile Organic Compounds (VOCs) and Reactive Organic Gasses (ROGs)** are hydrocarbon compounds (any compound containing various combinations of hydrogen and carbon atoms) that exist in the ambient air. Both VOCs and ROGs are precursors to ozone and contribute to the formation of smog through atmospheric photochemical reactions. VOCs and ROGs have different levels of reactivity; that is, they do not react at the same speed or do not form ozone to the same extent when exposed to photochemical processes. VOCs often have an odor, including such common VOCs as gasoline, alcohol, and the solvents used in paints. Odors generated by VOCs can irritate the eye, nose, and throat, which can reduce respiratory volume. In addition, studies have shown that the VOCs that cause odors can stimulate sensory nerves to cause neurochemical changes that might influence health, for instance, by compromising the immune system. (HDR, 2018, p. 27)

3.B.1.4 EXISTING AIR QUALITY

Air quality is evaluated in the context of ambient air quality standards published by the federal and State governments. These standards are the levels of air quality that are considered safe with an adequate margin of safety, to protect the public health and welfare. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) currently in effect, as well as health effects of each pollutant regulated under these standards are detailed in Table 3.B-1, *Ambient Air Quality Standards*.



Table 3.B-1 Ambient Air Quality Standards

Pollutant	Pollutant Concentration and Standard	Maximum Concentration		
		2014	2015	2016
Carbon Monoxide	Maximum 1-hour Concentration (ppm)	4.1	2.3	2.2
	Days> 20 ppm (State 1-hr standard)	0	0	0
	Days> 35 ppm (federal 1-hr standard)	0	0	0
	Maximum 8-hour Concentration (ppm)	2.4	1.8	1.7
	Days> 9 ppm (State 8-hr standard)	0	0	0
	Days> 9 ppm (federal 8-hr standard)	0	0	0
Ozone	Maximum 1-hour Concentration (ppm)	0.121	0.134	0.158
	Days> 0.09 ppm (State 1-hr standard)	38	52	70
	Maximum 8-hour Concentration (ppm)	0.099	0.117	0.118
	Days> 0.070 ppm (State 8-hr standard)	75	78	106
	Days> 0.070 ppm (federal 8-hr standard)	75	78	106
	Maximum 1-hour Concentration (ppm)	0.073	0.071	0.060
Nitrogen Dioxide	Days> 0.18 ppm (State 1-hr standard)	0	0	0
	Days> 0.10 ppm (federal 1-hr standard)	0	0	0
	Annual Arithmetic Mean (ppm)	0.018	0.015	0.016
	Exceed 0.030 ppm? (State Annual Standard)	No	No	No
	Exceed 0.053 ppm? (federal Annual Standard)	No	No	No
	Maximum 1-hour Concentration (ppb)	4.0	4.0	6.3
Sulfur Dioxide	Days> 250 ppb (State 1-hr standard)	0	0	0
	Days> 75 ppb (federal 1-hr standard)	0	0	0
	Maximum 24-hour Concentration (ppb)	NA	NA	NA
	Days> 40 ppb (State 24-hr standard)	NA	NA	NA
	Maximum 24-hour Concentration ($\mu\text{g}/\text{m}^3$)	157.2	187.0	277.0
	Days> 50 $\mu\text{g}/\text{m}^3$ (State 24-hr standard)	2	3	4
Coarse Particulate Matter (PM ₁₀)	Days> 150 $\mu\text{g}/\text{m}^3$ (federal 24-hr standard)	1	1	1
	Annual Arithmetic Mean ($\mu\text{g}/\text{m}^3$)	32.7	31.7	NA
	Exceed 20 $\mu\text{g}/\text{m}^3$? (State Annual Standard)	Yes	Yes	NA
	Maximum 24-hour Concentration ($\mu\text{g}/\text{m}^3$)	32.2	53.5	53.5
	Days> 35 $\mu\text{g}/\text{m}^3$ (federal 24-hr standard)	0	2	1
	Annual Arithmetic Mean ($\mu\text{g}/\text{m}^3$)	NA	10.7	11.1
Fine Particulate Matter (PM _{2.5})	Exceed 12 $\mu\text{g}/\text{m}^3$? (State Annual Standard)	NA	No	No
	Exceed 12 $\mu\text{g}/\text{m}^3$? (federal Annual Standard)	NA	No	No

Source: (HDR, 2018, Table 3-1)

A region's air quality is determined to be healthful or unhealthful by comparing contaminant levels in ambient air samples to the State and federal standards presented in Table 3.B-1. The air quality in a region is considered to be in attainment by the State of California if the measured ambient air pollutant levels for ozone (O₃), carbon monoxide (CO), sulfur dioxide (SO₂), nitrogen dioxide (NO₂), inhalable particulate matter (PM₁₀), and fine particulate matter (PM_{2.5}) are not equaled or exceeded at any time in any consecutive three-year period; and the federal standards (other than O₃, PM₁₀, PM_{2.5}, and those based on annual averages or arithmetic mean) are not exceeded more than once per year. The O₃ standard is attained when the fourth highest eight-hour



concentration in a year, averaged over three years, is equal to or less than the standard. For PM₁₀, the 24-hour standard is attained when 99% of the daily concentrations, averaged over three years, are equal to or less than the standard. (CARB, 2009; EPA, 1990)

A. Attainment Status of Criteria Pollutants in the SCAB

The federal government designated seven pollutants that are pervasive enough across the nation to warrant national health standards. Called “criteria pollutants,” these are O₃, NO₂, PM₁₀, PM_{2.5}, CO, Pb, and SO₂ (SCAQMD, 2018, p. 3). The SCAQMD monitors levels of various criteria air pollutants at 30 monitoring stations throughout its jurisdiction. In 2015, the most recent year for which detailed data was available, the federal and State ambient air quality standard (NAAQS and CAQQS) were exceeded on at least one or more days for O₃, PM₁₀, and PM_{2.5}. No areas of the SCAB exceeded federal or State standards for NO₂, SO₂, CO, or Pb. (SCAQMD, 2018, p. 22) The attainment status for criteria pollutants within the SCAB is summarized in Table 3.B-2, *Attainment Status of Criteria Pollutants in the South Coast Air Basin*.

Table 3.B-2 Attainment Status of Criteria Pollutants in the South Coast Air Basin

Criteria Pollutant	State Designation	Federal Designation
Ozone - 1hour standard	Nonattainment	Nonattainment (“extreme”)
Ozone - 8 hour standard	Nonattainment	Nonattainment (“extreme”)
PM ₁₀	Nonattainment	Attainment (Maintenance)
PM _{2.5}	Nonattainment	Nonattainment (“serious”)
Carbon Monoxide	Attainment	Attainment (Maintenance)
Nitrogen Dioxide	Attainment	Unclassifiable/Attainment
Sulfur Dioxide	Attainment	Unclassifiable/Attainment
Lead ²	Attainment	Nonattainment (Partial)

Source: State/Federal designations were taken from <http://www.arb.ca.gov/desig/adm/adm.htm>

B. Air Quality History Trends

1. Criteria Pollutants

The SCAB has experienced unhealthful air since World War II and historically has been one of the most unhealthful air basins in the United States; however, as a result of the region’s air pollution control efforts over the last ±68 years, air pollution concentrations in the SCAB have dramatically reduced. This overall air quality within the SCAB is dramatically improving as the result of regulatory programs and is expected to continue to improve in the future as government regulations become more stringent. For example, peak ozone levels were cut by almost three-fourths since air monitoring began in the 1950s and population exposure to ozone was cut in half during the 1980s alone. (SCAQMD, 2018, p. 2)

The SCAQMD’s *Final 2016 Air Quality Management Plan* states, “the remarkable historical improvement in air quality since the 1970’s is the direct result of Southern California’s comprehensive, multiyear strategy of reducing air pollution from all sources as outlined in its AQMPs.” Ozone, NO_x, VOCs, and CO have been decreasing in the Basin since 1975 and are projected to continue to decrease through 2020. These decreases result primarily from motor vehicle controls and reductions in evaporative emissions. Although vehicle miles



traveled in the Basin continue to increase, NO_x and VOC levels are decreasing because of the mandated controls on motor vehicles and the replacement of older polluting vehicles with lower-emitting vehicles. NO_x emissions from electric utilities have also decreased due to use of cleaner fuels and renewable energy. Ozone contour maps show that the number of days exceeding the national 8-hour standard decreased between 1997 and 2007. The overall trends of PM₁₀ and PM_{2.5} in the air (not emissions) show an overall improvement since 1975. Direct emissions of PM₁₀ have remained somewhat constant in the Basin and direct emissions of PM_{2.5} have decreased slightly since 1975.

Further, according to SCAQMD:

Ozone levels have fallen by more than three-quarters since peaks in the mid-1950s. U.S. EPA revised and strengthened the 8-hour ozone NAAQS, effective December 28, 2015, from concentrations exceeding 75 parts-per-billion (ppb) to concentrations exceeding 70 ppb. In 2017, the new 2015 8-hour ozone NAAQS was exceeded in the Basin on 145 days and the former 2008 ozone NAAQS was exceeded on 122 days based on preliminary data. The 2015 ozone NAAQS was exceeded in the Basin on 132 days in 2016 and 113 days in 2015. The increase in ozone exceedance days in 2016 and 2017 is largely attributed to enhanced photochemical ozone formation through the spring, summer and fall period due to persistent weather patterns that limited vertical mixing and warmed the lower atmosphere. Other potential factors are being assessed; for example, possible changes in relative emissions of VOC or NO_x. While the ozone control strategy continued to reduce precursor emissions from sources in the Basin in 2017, ozone-forming emissions transported from several long-term, large wildfires in southern and central California in the summer may have also played a role in the increase of exceedance days. The maximum observed ozone levels also show some year-to-year variability, but have generally been decreasing over the years. The highest 8-hour ozone level in the preliminary 2017 data was 136 ppb, compared to 122 ppb in 2016 and 127 ppb in 2015.

PM_{2.5} levels have decreased dramatically in the Basin since 1999; however, design value concentrations are still above the current annual 24-hour NAAQS. Effective March 18, 2013, U.S. EPA strengthened the annual average PM_{2.5} standard from 15 µg/m³ to 12 µg/m³, while retaining the 24-hour PM_{2.5} NAAQS of 35 µg/m³. In 2017, the 24-hour PM_{2.5} NAAQS was exceeded on 10 days at the highest station (Metropolitan Riverside County), based on preliminary filter data. In 2016, the same station exceeded the 24-hour NAAQS on only 6 days, the lowest on record, due to improving emissions and the influence of the increase in wintertime storm systems and improved ventilation in the Basin on many days in the winter months when the highest PM_{2.5} concentrations typically occur. The PM_{2.5} NAAQS was exceeded on seventeen days in 2015. Both the 2015 and 2017 PM_{2.5} measurements were strongly influenced by the long-term effects of the drought in California and 2017 was also influenced by large fires in southern and central California. The Basin's peak annual average PM_{2.5} level in 2017, 14.6 µg/m³ (preliminary data) was a little lower than the 2016 value, 14.8 µg/m³, which occurred at the same site. In 2017, quarterly PM_{2.5} averages for the fourth quarter were above normal for recent years, likely due to the impact of smoke transported from the series of wildfires that burned for several days in December. Out of the 29 wildfires across Southern California in



December, six were very large fires, including the Thomas Fire which became the largest wildfire in modern California history.

In 2006, U.S. EPA rescinded the annual federal standard for PM_{10} but retained the 24-hour standard. U.S. EPA re-designated the Basin as attainment of the health-based standard for PM_{10} , effective July 26, 2013. Ambient levels of PM_{10} in the Basin have continued to meet the federal 24-hour PM_{10} NAAQS through 2017.

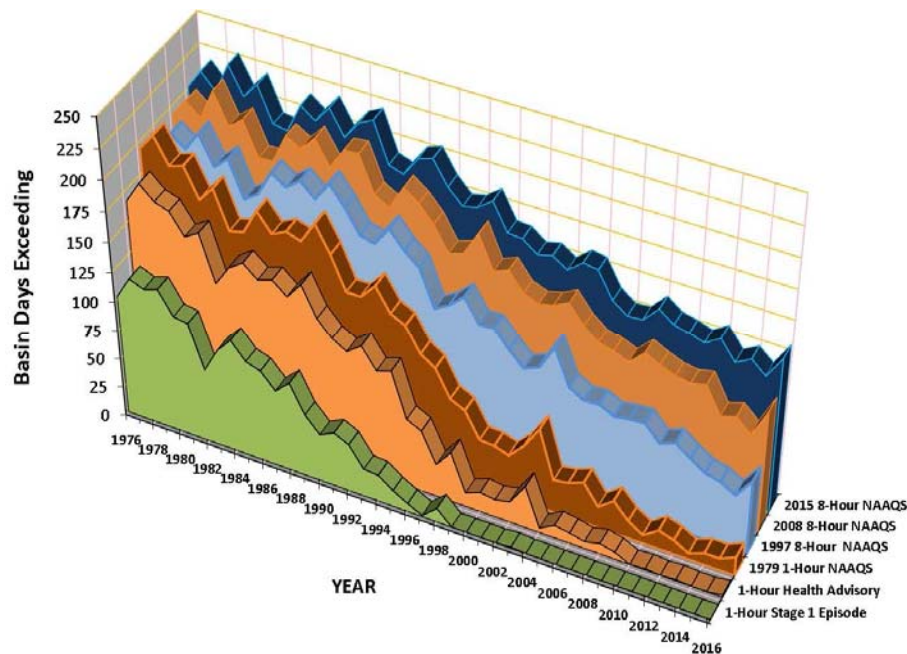
In November 2008, U.S. EPA revised the lead NAAQS from a $1.5 \mu\text{g}/\text{m}^3$ quarterly average to a rolling 3-month average of $0.15 \mu\text{g}/\text{m}^3$ and added new near-source monitoring requirements. The Los Angeles County portion of the Basin has been designated non-attainment for lead due to monitored concentrations near one facility. However, starting with the 3-year 2012-2014 design value, the Basin has met the lead standard. A re-designation request to U.S. EPA is pending. Nitrogen dioxide, sulfur dioxide, and carbon monoxide levels have improved in the Basin and are in full attainment of the NAAQS. In 2007, U.S. EPA formally re-designated the Basin to attainment of the carbon monoxide NAAQS. Maximum levels of carbon monoxide in the Basin have been consistently less than one-third of the federal standards since 2004. In 2010, U.S. EPA revised the NO_2 1-hour standard to a level of 100 ppb and the SO_2 1-hour standard to a level of 75 ppb. In 2017, all sites in the Basin remained in attainment of these NAAQS.

(SCAQMD, 2018, pp. 4-5)

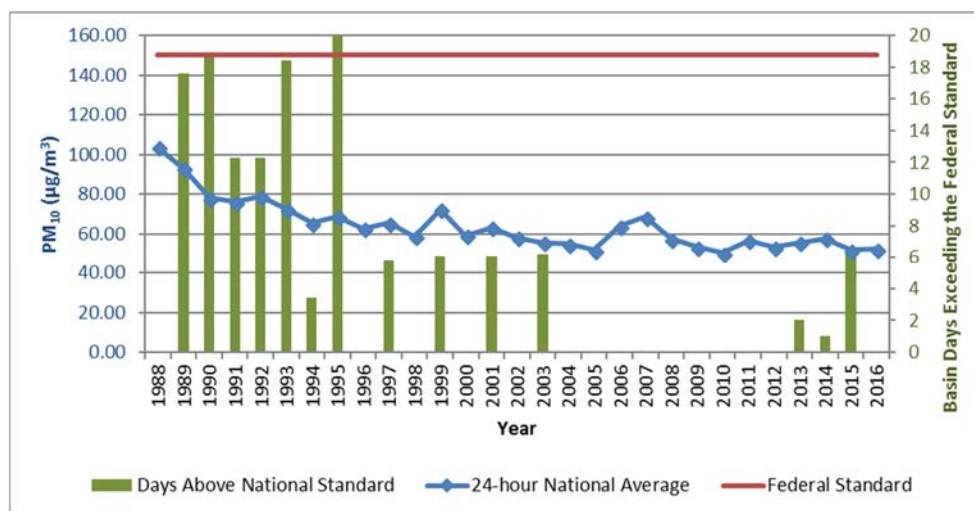
The graphs on the following pages show air quality trend information as reported by the SCAQMD. The overall trend represents improvement in air quality. It should be noted, however, that air quality fluctuates day to day and year to year based on meteorological conditions including but not limited to wind patterns, temperature variations, humidity levels, and other factors. The SCAQMD acknowledged at a Mobile Source Committee Meeting held on October 20, 2017, that the 2016 and 2017 summers were characterized by a “very strong, persistent high-pressure ridge aloft and warm temperatures, causing strong temperature inversions and enhanced ozone photochemistry; and, above average surface temperatures occurred through the summer months in the western third of the U.S.” In summary, the SCAQMD reported that “[l]ong-term, ozone shows a downward trend, but with marginal increases in 2016 and 2017; year-to-year fluctuations of this magnitude are typical but needs continual assessment” (SCAQMD, 2017b).



South Coast Air Basin Ozone Trend



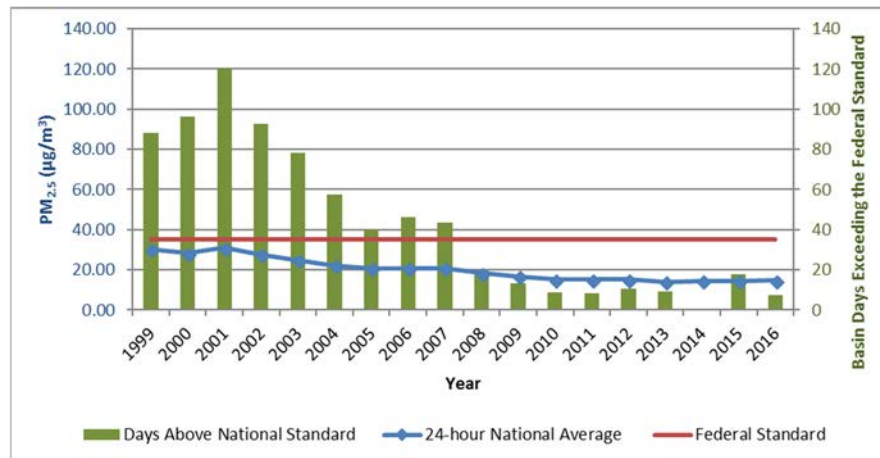
South Coast Air Basin PM₁₀ Trend



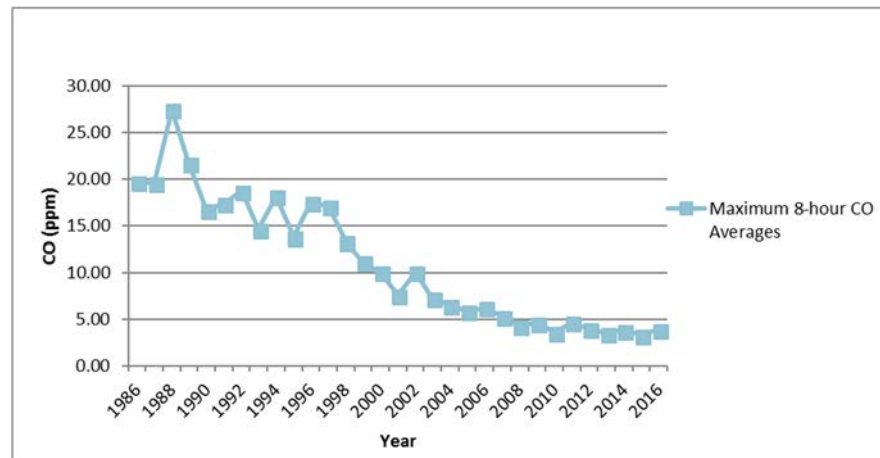
Source: (SCAQMD, 2017b)



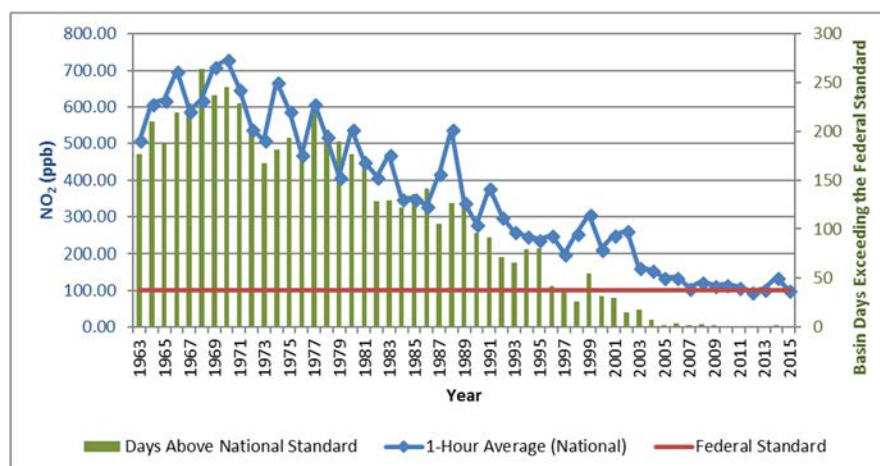
South Coast Air Basin $PM_{2.5}$ Trend



South Coast Air Basin Carbon Monoxide Trend



South Coast Air Basin NO_2 Trend



Source: (SCAQMD, 2017b)



3.B.2 REGULATORY FRAMEWORK

The following is a brief description of the federal, State, and local environmental laws and related regulations governing air quality emissions.

3.B.2.1 FEDERAL

A. Federal Clean Air Act

The Clean Air Act (CAA; 42 U.S.C. § 7401 et seq.) is the comprehensive federal law that regulates air emissions from stationary and mobile sources. Among other things, this law authorizes Environmental Protection Agency (EPA) to establish NAAQS to protect public health and public welfare and to regulate emissions of hazardous air pollutants, which include O₃, CO, NO_x, SO₂, PM₁₀, PM_{2.5}, and lead. (EPA, 2017a)

One of the goals of the CAA was to set and achieve NAAQS in every state by 1975 in order to address the public health and welfare risks posed by certain widespread air pollutants. The setting of these pollutant standards was coupled with directing the states to develop state implementation plans (SIPs), applicable to appropriate industrial sources in the State, in order to achieve these standards. The CAA was amended in 1977 and 1990 primarily to set new goals (dates) for achieving attainment of NAAQS since many areas of the country had failed to meet the deadlines. (EPA, 2017a)

The sections of the federal CAA most directly applicable to the development of the Project site include Title I (Non-Attainment Provisions) and Title II (Mobile Source Provisions). Title I provisions address the urban air pollution problems of ozone (smog), carbon monoxide (CO), and particulate matter (PM₁₀). Specifically, it clarifies how areas are designated and re-designated "attainment." It also allows EPA to define the boundaries of "nonattainment" areas: geographical areas whose air quality does not meet Federal air quality standards designed to protect public health. (EPA, 2017b) Mobile source emissions are regulated in accordance with the CAA Title II provisions. These standards are intended to reduce tailpipe emissions of hydrocarbons, CO, and NO_x on a phased-in basis that began in model year 1994. Automobile manufacturers also are required to reduce vehicle emissions resulting from the evaporation of gasoline during refueling. These provisions further require the use of cleaner burning gasoline and other cleaner burning fuels such as methanol and natural gas. (EPA, 2017c)

Section 112 of the Clean Air Act addresses emissions of hazardous air pollutants. Prior to 1990, CAA established a risk-based program under which only a few standards were developed. The 1990 Clean Air Act Amendments revised Section 112 to first require issuance of technology-based standards for major sources and certain area sources. "Major sources" are defined as a stationary source or group of stationary sources that emit or have the potential to emit 10 tons per year or more of a hazardous air pollutant or 25 tons per year or more of a combination of hazardous air pollutants. An "area source" is any stationary source that is not a major source. (EPA, 2017a)

For major sources, Section 112 requires that EPA establish emission standards that require the maximum degree of reduction in emissions of hazardous air pollutants. These emission standards are commonly referred to as "maximum achievable control technology" or "MACT" standards. Eight years after the technology-based MACT standards are issued for a source category, EPA is required to review those standards to determine



whether any residual risk exists for that source category and, if necessary, revise the standards to address such risk. (EPA, 2017a)

3.B.2.2 STATE

A. California Clean Air Act (CCAA)

The California Clean Air Act (CCAA) establishes numerous requirements for district plans to attain State ambient air quality standards for criteria air contaminants. The CCAA mandates achievement of the maximum degree of emissions reductions possible from vehicular and other mobile sources in order to attain the State's ambient air quality standards, the CAAQS, by the earliest practical date. The CARB established the CAAQS for all pollutants for which the federal government has NAAQS and, in addition, established standards for sulfates, visibility, hydrogen sulfide, and vinyl chloride. Generally, the CAAQS are more stringent than the NAAQS. For districts with serious air pollution, its attainment plan should include the following: no net increase in emissions from new and modified stationary sources; and best available retrofit technology for existing sources. (SCAQMD, 2017b)

B. Air Quality Management Planning

The California Air Resources Board (CARB) and local air districts throughout the State are responsible for developing clean air plans to demonstrate how and when California will attain air quality standards established under both the CAA and CCAA. For the areas within California that have not attained air quality standards, CARB works with local air districts to develop and implement State and local attainment plans. In general, attainment plans contain a discussion of ambient air quality data and trends; a baseline emissions inventory; future year projections of emissions, which account for growth projections and already adopted control measures; a comprehensive control strategy of additional measures needed to reach attainment; an attainment demonstration, which generally involves complex modeling; and contingency measures. Plans may also include interim milestones for progress toward attainment. Air quality planning activities undertaken by CARB also include the development of policies, guidance, and regulations related to State and federal ambient air quality standards; coordination with local agencies on transportation plans and strategies; and providing assistance to local districts and transportation agencies. (CARB, 2012)

3.B.2.3 REGIONAL

A. Air Quality Management Planning

The Project site is located within the SCAB, which is characterized by relatively poor air quality. The SCAQMD has jurisdiction over an approximately 10,743 square-mile area consisting of the four-county Basin and the Los Angeles County and Riverside County portions of what use to be referred to as the Southeast Desert Air Basin. In these areas, the SCAQMD is principally responsible for air pollution control, and works directly with the Southern California Association of Governments (SCAG), county transportation commissions, local governments, as well as State and federal agencies to reduce emissions from stationary, mobile, and indirect sources to meet State and federal ambient air quality standards.

Currently, the NAAQS and CAAQS are exceeded in most parts of the SCAB. Currently, these State and federal air quality standards are exceeded in most parts of the Basin. In response, the SCAQMD has adopted a series of Air Quality Management Plans (AQMPs) to meet the State and federal ambient air quality standards.



AQMPs are updated regularly in order to more effectively reduce emissions, accommodate growth, and to minimize any negative fiscal impacts of air pollution control on the economy.

In March 2017, the AQMD released the Final 2016 AQMP. The 2016 AQMP continues to evaluate current integrated strategies and control measures to meet the NAAQS, as well as, explore new and innovative methods to reach its goals. Some of these approaches include utilizing incentive programs, recognizing existing co-benefit programs from other sectors, and developing a strategy with fair-share reductions at the federal, State, and local levels. Similar to the 2012 AQMP, the 2016 AQMP incorporates scientific and technological information and planning assumptions, including the 2016 RTP/SCS and updated emission inventory methodologies for various source categories.

B. South Coast Air Quality Management District Rules

The SCAQMD enforces rules related to air pollutant emissions in the SCAB. Rules with applicability to the Project include, but are not limited to those listed below.

- SCAQMD Rule 402: Nuisance Odors
- SCAQMD Rule 403: Fugitive Dust
- SCAQMD Rule 431.2: Low Sulfur Fuel
- SCAQMD Rule 1113: Architectural Coatings
- SCAQMD Rule 1186: PM₁₀ Emissions from Paved and Unpaved Roads, and Livestock Operations

3.B.3 METHODOLOGY FOR CALCULATING AIR QUALITY EMISSIONS

CEQA Guidelines Section 15064.4(a)(1) states that a CEQA lead agency may use a model or methodology to quantify air quality emissions associated with a project. The California Emission Estimator Model (CalEEMod), developed by the SCAQMD in conjunction with the California Air Pollution Control Officers Association (CAPCOA) and other California air districts, was used to quantify air quality emissions from Project-related construction and operational activities. The CalEEMod (v2016.3.1) was utilized in quantifying air quality emissions for the Project (HDR, 2018, p. 27). Output from CalEEMod for both construction and operational activity are provided in Appendix A of DREIR *Technical Appendix B*. Emissions of criteria air pollutants were estimated using existing conditions information, Project construction details, and Project operations information, as well as a combination of emission factors from the following sources: CalEEMod (Version 2016.3.1) emission model for estimating exhaust emissions from off-road construction equipment and on-road motor vehicles and CalEEMod (Version 2016.3.1) emission model for calculating the long-term mobile, energy, and area source emissions. (HDR, 2018, p. 27)



3.B.4 THRESHOLDS OF SIGNIFICANCE

Section III of Appendix G to the CEQA Guidelines addresses adverse effects to air quality, and includes the following thresholds that are used herein to evaluate the Project's impacts on air quality (OPR, 2016):

- a. *Conflict with or obstruct implementation of the applicable air quality plan;*
- b. *Violate any air quality standard or contribute substantially to an existing or projected air quality violation;*
- c. *Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);*
- d. *Expose sensitive receptors to substantial pollutant concentrations; or*
- e. *Create objectionable odors affecting a substantial number of people.*

Threshold a, as described above, evaluates whether the proposed Project would conflict with SCAQMD's 2016 AQMP, which addresses State and federal requirements under the CAA. A conflict with the AQMP standards and requirements would inhibit the SCAQMD's ability to achieve State and federal standards for air quality.

Within the context of the above threshold considerations, emissions generated by a development project would be significant under Thresholds b and c if emissions are projected to exceed the regional thresholds established by the SCAQMD for criteria pollutants and would be significant under Threshold d if emissions are projected to exceed the localized thresholds established by the State of California and the SCAQMD for criteria pollutants. The criteria applicable to the proposed Project are summarized in Table 3.B-3, *SCAQMD Air Quality Thresholds of Significance*, and Table 3.B-4, *SCAQMD Localized Significance Thresholds*. Pursuant to SCAQMD guidance, any development project in the SCAB with daily emissions that would exceed any of the thresholds summarized in Table 3.B-3 and Table 3.B-4 would be considered to have a significant impact to air quality on both a direct (individual) and cumulatively-considerable basis. Therefore, this analysis assumes that individual projects that do not generate operational or construction emissions that exceed the SCAQMD's recommended daily thresholds for project-specific impacts would also not cause a cumulatively considerable increase in emissions for those pollutants for which the SCAB is in nonattainment, and, therefore, would not be considered to have a significant, adverse air quality impact. Alternatively, individual Project-related construction and operational emissions that exceed SCAQMD thresholds for Project-specific impacts would be considered cumulatively considerable.

The SCAQMD published a report giving direction on how to address cumulative impacts from air pollution: *White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution*. In this report the SCAQMD states:

"...Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-



specific thresholds are generally not considered to be cumulatively significant.” (SCAQMD, 2003, p. D-3)

Table 3.B-3 SCAQMD Air Quality Thresholds of Significance

Pollutant	Construction (pounds/day)	Operation (pounds/day)
Oxides of Nitrogen (NO _x)	100	55
Volatile Organic Compounds (VOC)	75	55
PM ₁₀	150	150
PM _{2.5}	55	55
Oxides of Sulfur (SO _x)	150	150
CO	550	550

Source: (HDR, 2018, Table 4-1)

Table 3.B-4 SCAQMD Localized Significance Thresholds

Pollutant	Construction (pounds/day)	Operation (pounds/day)
Oxides of Nitrogen (NO _x)	270	270
PM ₁₀	14	4
PM _{2.5}	8	2
CO	1,746	1,746

Source: (HDR, 2018, Table 4-2)

Additionally, the significance of localized emissions impacts depends on whether ambient levels in the vicinity of any given project are above or below State standards. In the case of CO and NO₂, if ambient levels are below the standards, a project is considered to have a significant impact if project emissions result in an exceedance of one or more of these standards. If ambient levels already exceed a State or federal standard, then emissions are considered significant if they increase ambient concentrations by a measurable amount. This would apply to PM₁₀ and PM_{2.5} both of which are non-attainment pollutants in the SCAB. Applicable localized thresholds as follows:

- California State 1-hour CO standard of 20.0 ppm;
- California State 8-hour CO standard of 9.0 ppm;
- California State 1-hour NO₂ standard of 0.18 ppm;
- California State Annual NO₂ standard of 0.03 ppm;
- SCAQMD 24-hour operational PM₁₀ LST of 2.5 µg/m³;
- SCAQMD Annual-operational PM₁₀ LST of 1.0 µg/m³;
- SCAQMD 24-hour operational PM_{2.5} LST of 2.5 µg/m³.



3.B.5 IMPACT ANALYSIS

<i>Threshold a) Would the Project conflict with or obstruct implementation of the applicable air quality plan?</i>

The 2016 SCAQMD AQMP is the applicable air quality plan for the Project area, which estimates long-term air quality conditions for the SCAB. The air quality conditions presented in the 2016 AQMP are based in part on the growth forecasts identified by SCAG in its 2016-2040 RTP/SCS, which is a regional transportation and housing plan that transcends jurisdictional boundaries. The RTP/SCS anticipates that development in the various incorporated and unincorporated areas within the SCAB will occur in accordance with the adopted general plans for these areas. In addition, the air quality conditions presented in the 2016 AQMP are based on the assumption that future development projects will implement strategies to reduce emissions generated during the construction and operational phases of development. Accordingly, if a proposed project is consistent with these growth forecasts, and if available emissions reduction strategies are implemented as effectively as possible on a project-specific basis, then the project is considered to be consistent with the 2016 AQMP.

The SCAQMD has established criteria for determining consistency with the 2016 AQMP. These criteria are defined in Chapter 12, Sections 12.2 and 12.3 of the SCAQMD CEQA Air Quality Handbook (1993) and are discussed below:

- *Consistency Criterion No. 1: The proposed project will not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.*

Consistency Criterion No. 1 refers to violations of the CAAQS and NAAQS. Violations of the CAAQS and NAAQS would occur if LSTs were exceeded. As evaluated within the response to Threshold d below, the Project's localized construction-source emissions would not exceed the applicable level of significance thresholds, and a less-than-significant impact would occur. In addition, the Project's calculated construction and operational-related emissions would not exceed the applicable SCAQMD Regional Thresholds as shown under the responses to Thresholds b and c. Therefore, the Project does not have the potential to conflict with the AQMP according to this criterion.

- *Consistency Criterion No. 2: The Project will not exceed the assumptions in the AQMP based on the years of project build-out phase.*

The growth forecasts used in the AQMP to calculate future emissions levels are based in part on land use data provided by lead agency general plan documentation. Projects that increase the intensity of use on a subject property may, as compared to its General Plan designation, result in increased stationary area source emissions and/or vehicle source emissions when compared to the AQMP assumptions. However, if a project does not exceed the growth projections in the applicable local general plan, then the project is considered to be consistent with the growth assumptions in the AQMP. The prevailing planning document for the Project site is the San Bernardino County General Plan, which designates the Project site for Community Industrial (IC) land use. The Project does not propose a General Plan Amendment and the Project's proposed features would



be consistent with the IC development standards enforced by the San Bernardino County General Plan and would be subject to a Conditional Use Permit. As such, based on Consistency Criterion No. 2, the proposed Project would not exceed the assumptions in the 2016 AQMP and would be consistent with the 2016 AQMP.

On the basis of the preceding discussion, the Project meets both the first and second criteria for determining consistency with the 2016 SCAQMD AQMP. Accordingly, the Project is considered to be consistent with the 2016 AQMP and a less-than-significant impact would occur.

Threshold b) *Would the Project violate any air quality standard or contribute substantially to an existing or projected air quality violation?*

Threshold c) *Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?*

1. Construction Emissions Impact Analysis

For purposes of this analysis, it is analytically assumed that construction of the Project would commence in 2018 and last through 2020 and would consist of two (2) construction phases. For purposes of this analysis it is analytically assumed that both phases of construction would overlap. If construction activities occur at a later date than assumed in this DREIR, emissions quantities associated with construction equipment exhaust would be less than disclosed in this Subsection due to the application of more restrictive regulatory requirements for construction equipment and on-going replacement of older construction fleet equipment with newer, less-polluting equipment by construction contractors over time.

SCAQMD Rules that are applicable during construction activity for the proposed Project include but are not limited to: Rule 1113 (Architectural Coatings); Rule 431.2 (Low Sulfur Fuel); Rule 403 (Fugitive Dust); and Rule 1186 / 1186.1 (Street Sweepers).

The estimated maximum daily construction-related air emissions for the Project are summarized in Table 3.B-5, *Maximum Daily Peak Construction Emissions Summary*. As shown in Table 3.B-5, emissions resulting from Project construction would not exceed the Regional Thresholds established by the SCAQMD for emissions for any criteria pollutant (HDR, 2018, p. 32). Project-related construction would not violate any air quality standard or contribute substantially to an existing or projected air quality violation and would not result in a cumulatively-considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard. Therefore, a less-than-significant impact would occur.



Table 3.B-5 Maximum Daily Peak Construction Emissions Summary

Phase	CO	ROGs	NO _x	PM ₁₀	PM _{2.5}
Site Preparation	44.3	2.9	89.8	9.3	5.0
Grading	30.3	1.7	37.6	2.3	1.3
Building Construction	33.1	3.0	36.3	4.4	1.9
Paving	18.0	1.7	20.2	0.8	0.7
Architectural Coating	3.8	14.8	2.5	0.6	0.2
Peak Day (lbs/day)	44.3	14.8	89.8	9.3	5.0
SCAQMD Thresholds	550	75	100	150	55
Exceedance	No	No	No	No	No

Source: (HDR, 2018, Table 5-1)

2. Operational Emissions Impact Analysis

Long-term air pollutant emission impacts are those associated with stationary sources and mobile sources involving any Project-related changes. The proposed Project would have potential long-term operational air quality impacts from mobile source emissions associated with vehicular trips generated by the proposed Project and stationary source emissions from on-site energy consumption. According to the traffic study for Project operations there would be 657 daily trips on Saturdays and 1,112 daily trips on Sundays associated with the proposed Project. Weekday traffic would be substantially less, so maximum daily weekend traffic is used to calculate the Project's maximum daily operational vehicular emissions. (HDR, 2018, p. 33)

The Project's operational source emissions are summarized below in Table 3.B-6, *Summary of Operational Emissions*. Detailed emissions model outputs are presented in Appendix A of the Air Quality Impact Analysis (*Technical Appendix B*). As shown in Table 3.B-6, the Project's operational emissions would not exceed SCAQMD's regional criteria thresholds for CO, SO_x, NO_x, ROGs, PM₁₀, or PM_{2.5}. Accordingly, the Project would not emit substantial concentrations of CO, SO_x, NO_x, ROGs, PM₁₀, or PM_{2.5} during long-term operation and would not cause or contribute to an existing or projected air quality violation, on either a direct or cumulatively considerable basis. Therefore, the Project would result in less-than-significant impacts associated with emissions of CO, SO_x, NO_x, ROGs, PM₁₀, or PM_{2.5} during long-term operation.

Table 3.B-6 Summary of Operational Emissions

Source	CO	NO _x	ROG	SO _x	PM ₁₀	PM _{2.5}
Area	0.1	0.0	1.3	0.0	0.0	0.0
Energy	0.3	0.4	0.0	0.0	0.0	0.0
Mobile	20.5	8.5	1.9	0.1	5.1	1.4
Total	20.9	8.9	3.2	0.1	5.1	1.4
SCAQMD Thresholds	550	55	55	150	150	55
Exceeds Daily SCAQMD Threshold?	No	No	No	No	No	No

Note: Columns may not add up due to rounding.

Source: (HDR, 2018, Table 5-3)



Threshold d) Would the Project expose sensitive receptors to substantial pollutant concentrations?

1. Construction Localized Emissions Impact Analysis

Table 3.B-7, *Localized Significance Summary - Construction*, identifies the localized impacts at the nearest receptor location in the vicinity of the Project (residential land uses located approximately 90 feet to the west of the Project site). Table 3.B-7 shows the construction-related emissions of CO, NO_x, PM₁₀, or PM_{2.5} compared to the localized significance thresholds (LSTs) for the West San Bernardino Valley area at a distance of 25 meters. As required by the SCAQMD's LST Methodology (Final Localized Significance Threshold Methodology, July 2008), only the on-site construction emissions are included. (HDR, 2018, p. 33) As shown in Table 3.B-7, Project-related construction emissions would not exceed the SCAQMD Localized Threshold for CO, NO_x, PM₁₀, or PM_{2.5}. Accordingly, construction of the proposed Project would not result in the exposure of any sensitive receptors to substantial pollutant concentrations. Therefore, localized emissions from construction of the Project would result in less-than-significant impacts with respect to Threshold d. Refer to Section 4 of the Project's Air Quality Impact Analysis (*Technical Appendix B* to this DREIR) for a detailed explanation of the model inputs and equations used in the analysis of construction-related localized emissions.

Table 3.B-7 Localized Significance Summary - Construction

Project Phase	Emission Rates (lbs/day)			
	CO	NO _x	PM ₁₀	PM _{2.5}
Site Preparation	35.7	52.2	6.8	4.3
Grading	15.7	20.0	1.0	0.7
Building Construction	17.9	23.6	0.9	0.9
Paving	17.3	20.1	0.7	0.7
Architectural Coating	1.8	2.4	0.1	0.1
Peak Day (lbs/day)	35.7	52.2	6.8	4.3
SCAQMD Thresholds	1,746	270	14	8
Exceeds Daily SCAQMD Threshold?	No	No	No	No

Source: (HDR, 2018, Table 5-2)

2. Operational Localized Emissions Impact Analysis

Table 3.B-8, *Localized Significance Summary - Operation*, presents the results of the LST analysis for long-term operation of the Project. As required by the SCAQMD's LST Methodology (Final Localized Significance Threshold Methodology, July 2008), only the on-site operational emissions are included. (HDR, 2018, p. 33) Detailed operational localized emissions model outputs are presented in Appendix A of *Technical Appendix B* to this DREIR. As shown on Table 3.B-8, operational emissions would not exceed the SCAQMD's LSTs for any criteria pollutant at the nearest sensitive receptor (residential neighborhood located approximately 90 feet to the west of the Project site). Therefore, the Project would have a less-than-significant localized impact during operational activity.



Table 3.B-8 Localized Significance Summary - Operation

Project Phase	Emission Rates (lbs/day)			
	CO	NO _x	PM ₁₀	PM _{2.5}
Area	0.1	0.0	0.0	0.0
Energy	0.3	0.4	0.0	0.0
Mobile	1.0	0.4	0.3	0.1
Total (lbs/day)	1.4	0.8	0.3	0.1
SCAQMD Thresholds	1,746	270	4	2
Exceeds Daily SCAQMD Threshold?	No	No	No	No

Source: (HDR, 2018, Table 5-4)

3. CO Hot Spot Impact Analysis

Vehicular trips associated with the proposed Project would contribute traffic to intersections and roadway segments within the Project's vicinity. Localized air quality impacts would occur when emissions from vehicular traffic increase as a result of the proposed Project. The primary mobile source pollutant of local concern is CO, which is caused by vehicle idling time and traffic flow conditions. Under normal weather conditions CO disperses rapidly with distance from the source, however, under more extreme weather conditions, CO concentrations near a congested roadway or intersection may reach unhealthful levels, affecting local sensitive receptors (residents, school children, the elderly, and hospital patients, etc.). (HDR, 2018, p. 34)

Typically, high CO concentrations are associated with roadways or intersections operating at unacceptable levels of service or with extremely high traffic volumes. In areas with high ambient background CO concentrations, modeling is recommended, to determine a project's effect on local CO levels. Existing CO concentrations in the immediate Project vicinity are not available, however, ambient CO levels monitored in the San Bernardino station showed a highest recorded 1-hour CO concentration of 4.1 ppm (the State standard is 20 ppm) and a highest 8-hour CO concentration of 2.4 ppm (the State standard is 9 ppm) during the past 3 years. (HDR, 2018, p. 34)

Given the low level of CO concentrations in the Project area under existing conditions, there is no possibility that Project-generated traffic trips would result in CO concentrations or "CO Hot Spot" exceeding the State or federal CO standards. Based on the foregoing analysis, the Project would result in less-than-significant impacts related to the creation of CO Hot Spots. (HDR, 2018, p. 34)

Threshold e) Would the Project create objectionable odors affecting a substantial number of people?

The Project could produce odors during proposed construction activities resulting from construction equipment exhaust, application of asphalt, and/or the application of architectural coatings; however, standard construction practices would minimize the odor emissions and their associated impacts. Furthermore, any odors emitted during construction would be temporary, short-term, and intermittent in nature. Temporary odor impacts would not affect substantial numbers of people due to the distance between nearby residences and the construction activities and would cease following completion of each phase of construction. In addition, construction activities on the Project site would be required to comply with SCAQMD Rule 402, which prohibits the discharge of odorous emissions that would create a public nuisance. Accordingly, the proposed Project would not create objectionable odors affecting a substantial number of people during construction.



Therefore, the Project would result in less-than-significant odor impacts during short-term construction activities and no mitigation is required.

During long-term operation, the proposed Project would include a church campus with a sports field and sports courts, which are not typically associated with objectionable odors. The temporary storage of refuse associated with the proposed Project's long-term operational use could be a potential source of odor; however, Project-generated refuse is required to be stored in covered containers and removed at regular intervals in compliance with the County's solid waste regulations (Chapter 84.24, *Solid Waste/Recyclable Materials Storage*), thereby precluding any significant odor impact. Furthermore, the proposed Project would be required to comply with SCAQMD Rule 402, which prohibits the discharge of odorous emissions that would create a public nuisance, during long-term operation. As such, long-term operation of the proposed Project would not create objectionable odors affecting a substantial number of people.

3.B.6 CUMULATIVE IMPACTS

The cumulative study area for air quality impacts is the SCAB, and the summary of projections approach based on General Plan buildout was used to evaluate the Project's potential cumulative traffic and vehicular-related air quality impacts. Furthermore, the SCAQMD considers all impacts that are significant and direct to also be cumulatively considerable.

As discussed above in the response to Threshold a, the proposed Project would be consistent with SCAQMD's 2016 AQMP because the Project is consistent with the County's General Plan and the Project's long-term operational emissions would not exceed the applicable SCAQMD regional thresholds. Because Project-related emissions would not exceed applicable SCAQMD regional thresholds, the Project would not result in cumulatively-considerable impacts in regards to Threshold a.

As previously shown in Table 3.B-5, *Maximum Daily Peak Construction Emissions Summary*, construction activities associated with the proposed Project would not exceed any of the applicable SCAQMD Regional Thresholds. Accordingly, impacts associated with Project-related construction emissions would be less-than-cumulatively considerable.

As previously shown in Table 3.B-6, *Summary of Operational Emissions*, Project operation would not exceed any of the applicable SCAQMD Regional Thresholds. Accordingly, impacts associated with Project-related operational emissions would be less-than-cumulatively considerable.

As shown on Table 3.B-7, *Localized Significance Summary - Construction*, Project-related construction emissions would not exceed the SCAQMD Localized Threshold for CO, NO_x, PM₁₀, or PM_{2.5}. Pursuant to the SCAQMD's CEQA Air Quality Significance Thresholds, projects with daily emissions that exceed any of the indicated thresholds should be considered as having an individually and cumulatively significant impact. While it is not likely based on the list of cumulative projects noted in Table 3.0-1, but theoretically possible that Project-related construction activities may occur simultaneous with and in close proximity to other developments, the Project's construction-related emissions would be below the SCAQMD LSTs; therefore, the Project's emissions during construction would be less than significant on a direct and cumulatively considerable basis.



As shown on Table 3.B-8, *Localized Significance Summary - Operation*, under long-term operating conditions, the Project's localized operational emissions would not exceed any of the SCAQMD LST thresholds. Pursuant to the SCAQMD's CEQA Air Quality Significance Thresholds, the Project would have a less-than-cumulatively considerable LST impact during long-term operation. Additionally, the Project would have no potential to result in or contribute to a CO "Hot Spot." Accordingly, impacts associated with CO "Hot Spots" would be less-than-cumulatively considerable.

As indicated under the response to Threshold e, construction of the Project could emit odors associated with construction equipment exhaust, application of asphalt, and/or the application of architectural coatings; however, standard construction practices would minimize the odor emissions and their associated impacts to below a level of significance. Moreover, construction-source odor emissions would be temporary, short-term, and intermittent in nature and would not result in persistent impacts that would affect substantial numbers of people. Accordingly, impacts associated with emissions of odor during the Project's construction activities would be less-than-cumulatively considerable.

Long-term operation of the proposed Project is not expected to produce objectionable odors. However, the temporary storage of refuse associated with the proposed Project's long-term operational use could be a potential source of odor. The Project and other cumulative developments would be required to comply with the County's solid waste regulations and SCAQMD Rule 402, which prohibits the discharge of odorous emissions that would create a public nuisance during long-term operation. As such, long-term operation of the proposed Project would not create or substantially contribute to objectionable odors affecting a substantial number of people and the Project would have a less-than-cumulatively considerable impact.

3.B.7 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION

Threshold a: Less-than-Significant Impact. The Project would be consistent with Consistency Criterion Nos. 1 and 2 of the SCAQMD's 2016 AQMP. Accordingly, the Project would not conflict with the implementation of the AQMP on a direct or cumulatively considerable basis.

Thresholds b and c: Less-than-Significant Impact. The Project would not exceed the SCAQMD significance thresholds for daily emissions under short-term construction and long-term operating conditions and would not result in significant direct or significant cumulatively considerable impacts. Project-related construction and operation would not violate any air quality standard or contribute substantially to an existing or projected air quality violation and would not result in a cumulatively-considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard.

Threshold d: Less-than-Significant Impact. Project-related emissions during construction and operation would not exceed the SCAQMD's LSTs for CO, NO_x, PM₁₀, or PM_{2.5}. Emissions also would not cause or contribute to a CO "Hot Spot." Impacts to sensitive receptors would therefore be less than significant.

Threshold e: Less-than-Significant Impact. Although short-term construction activities and long-term operational land uses could produce odors, compliance with standard construction requirements and regulations established by the County of San Bernardino and SCAQMD would reduce odor impacts to less-than-significant levels. Near- and long-term odor impacts would be less than significant.



3.B.8 MITIGATION MEASURES

3.B.8.1 APPLICABLE COUNTY REGULATIONS AND DESIGN REQUIREMENTS

The following are applicable regulations and design requirements that will be imposed on the Project by San Bernardino County pursuant to the County's Development Code or that are required regulatory requirements imposed by other agencies. Although these requirements technically do not meet CEQA's definition for mitigation because they are regulatory requirements, they are specified herein to document required Project compliance with applicable mandatory regulations.

- The Project will comply with Section 83.01.040(b) of Chapter 83.01.040, *Air Quality*, of the County's Development Code requiring permits from either the Mojave Desert Air Quality Management District or the SCAQMD.
- The Project will comply with the provisions of SCAQMD Rule 403, "Fugitive Dust." In compliance with Rule 403, Project contractors will be required to implement best available dust control measures during construction activities that generate fugitive dust, such as earth moving and stockpiling activities, grading, and equipment travel on unpaved roads.
- The Project will comply with the provisions of SCAQMD Rule 1186 "PM10 Emissions from Paved and Unpaved Roads and Livestock Operations" and Rule 1186.1, "Less-Polluting Street Sweepers." In compliance with Rules 1186 and 1186.1, Project contractors will be required to reduce the release of criteria pollutant emissions into the atmosphere during the operation of construction vehicles on paved and unpaved roads.
- The Project will comply with the provisions of SCAQMD Rule 1113, "Architectural Coatings." In compliance with Rule 1113, Project contractors will be required to limit the release of volatile organic compounds (VOCs) into the atmosphere during painting and application of other surface coatings.
- The Project will comply with SCAQMD Rule 431.2, "Sulfur Content of Liquid Fuels." In compliance with Rule 431.2, Project contractors will be required to limit the release of sulfur dioxide (SO_x) into the atmosphere from the burning of fuel.
- The Project will comply with California Code of Regulations Title 13, Division 3, Chapter 1, Article 4.5, Section 2025, "Regulation to Reduce Emissions of Diesel Particulate Matter, Oxides of Nitrogen and Other Criteria Pollutants, from In-Use Heavy-Duty Diesel-Fueled Vehicles" and California Code of Regulations Title 13, Division 3, Chapter 10, Article 1, Section 2485, "Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling." In compliance with these regulations, Project contractors must prohibit diesel-fueled construction equipment from idling for more than five (5) minutes.

3.B.8.2 MITIGATION MEASURES

Impacts would be less than significant and mitigation is not required.



3.C BIOLOGICAL RESOURCES

This Subsection documents existing biological resources on the Project site including sensitive plant and animal species and waters and wetlands that fall under the jurisdictional authority of a State or federal agency. An initial biological resources analysis was conducted of the Project site by Thomas Leslie Corporation (TLC) and others in 2001, 2002, and 2003, with follow-up investigations performed by PCR Services Corporation (PCR) and others in 2005, 2006, and 2007, and Tanner Environmental Services in 2007. Subsequently, Element Consulting (ELMT) prepared a Habitat Assessment report in 2018 that summarized the prior literature prepared for the Project site along with providing updated field surveys, a habitat assessment, and evaluation of the proposed Project's impacts to biological resources. The studies conducted by ELMT are included as *Technical Appendix C* of this Draft Revised EIR (DREIR) and were undertaken consistent with accepted scientific, technical, and professional standards pursuant to the California Environmental Quality Act (CEQA), United States Fish and Wildlife Service (USFWS), United States Army Corps of Engineers (ACOE), and California Department of Fish and Wildlife (CDFW), where appropriate.

3.C.1 ENVIRONMENTAL SETTING

The Project's site biological resource setting has been documented by biological resource field surveys dating back to 2001. General assessment field surveys were conducted by TLC biologists on August 26, 2001 throughout the site. The field team surveyed the property using standard survey techniques for biological assessments. The field surveys were focused on sensitive resources but also included observations of the site's general wildlife resources, including nests, scat, burrows, skeletal remains, and live individuals. During the 2001 surveys, TLC biologists also documented the plant and animal species observed and the surface characteristics and topography of the site and the suitability of its habitat for sensitive species. Because common names of plants and animals vary between references, scientific names are included herein during the first mention of a species; thereafter, common names consistent within the scientific name are used.

Focused surveys for sensitive plant species were conducted by TLC, Bill LaHaye, and Natural Resources Assessment, Inc. (NRA) on August 26, September 6, and October 1 through 6, 2001; by TLC and Bill LaHaye on April 7, 11, 13, 14, 17, 20, 27, June 21, 22, and July 25, 2002; and on June 21, 30, July 1 through 5, and 9, 2003 by ENVIRA. The surveys focused on areas where Parish's yampah (*Perideridia parishii* ssp. *parishii*), Nevin's barberry (*Berberis nevinii*), and San Bernardino Mountains owl's clover (*Castilleja lasiorhyncha*) had the potential to occur. Focused surveys (both am and pm) were conducted by TLC for the southern rubber boa (*Charina bottae umbratica*) on April 7, 11, 14, 17, 20, and 27, 2002. Focused protocol surveys for the California spotted owl (*Strix occidentalis occidentalis*) were performed by Bill LaHaye in April-August 2003 and September-October 2004, and by Tanner Environmental Services on July 22, 2005 and March 30-June 6, 2007. Protocol trapping surveys for the white-eared pocket mouse (*Perognathus alticolus alticolus*) were conducted by NRA October 1-6, 2001 and by ENVIRA June 30-July 5, 2003.

A reconnaissance level survey was performed by PCR on May 18, 2005 and February 1, 2006. The focus of the PCR field effort was to verify and update the previous TLC work, which included assessing the site and habitat conditions in view of the removal of numerous trees that died as the result of infestation by the western pine bark beetle. PCR also conducted protocol trapping surveys for the San Bernardino flying squirrel



(*Glaucomys oregonensis*) from April 17-20, 2007 and July 9-11, 2007 and a habitat re-assessment for the southern rubber boa in July 2007.

PCR reviewed available information on the known sensitive species in the area. The literature review included a review of standard field guides and texts on sensitive and non-sensitive biological resources, as well as the following sources:

- The California Natural Diversity Database (CNDDB) for the Harrison Mountain Quadrangle;
- General documents identifying potential resources on the property; and
- Previous survey reports and agency communications on biological resources of the site, specifically regarding the San Bernardino flying squirrel and southern rubber boa, were used to focus the survey efforts in the field.

Updated habitat assessments were conducted by ELMT on November 29, 2017 and February 8, 2018 throughout the Project site. The assessments were conducted to characterize the existing site conditions and assess the probability of occurrence of special-status plant and wildlife species that would be affected by the implementation of the Project. Additionally, ELMT reviewed available information on the known special-status biological resources in the area. The ELMT report contained in *Technical Appendix C* of this DREIR provides a detailed assessment of the suitability of the on-site habitat to support the southern rubber boa, San Bernardino flying squirrel, southern mountain yellow-legged frog (*Rana mucosa*), California spotted owl, as well as several other special-status plant and wildlife species identified by the CNDDB and other electronic data bases as potentially occurring in the vicinity of the Project site. While the information contained in the ELMT report utilizes information from the previous studies, the analysis provided in this DREIR subsection relies upon the conclusions provided in the ELMT report.

3.C.1.1 PLANT COMMUNITIES

Approximately 99% of the property is dominated by mixed conifer forest and the remaining 1% of the property contains riparian scrubs. Overall, the mixed conifer forest community forms a high-quality habitat on the Project site. The dominant plant species contained within the Project site include Ponderosa pine (*Pinus ponderosa*), Jeffrey pine (*Pinus jeffreyi*), white fir (*Abies concolor*), big cone pine (*Pinus coulteri*) incense cedar (*Calocedrus decurrens*), sugar pine (*Pinus labertiana*) and black oak (*Quercus kelloggii*). The understory species present within the Project site consists of California coffeeberry (*Rhamnus californica*) and California bay (*Umbellularia californica*).

Riparian scrubs occur along a flowing stream that flows down the middle of the site from the southwest to the northeast corner and is dominated by arroyo willow (*Salix lasiolepis*) with a shrub layer of mountain dogwood (*Cornus nuttallii*), California mugwort (*Artemisia douglasiana*), tarragon (*Aster dracunculoides*), and Mountain pink currant (*Ribes nevadense*). A complete list of plant species recorded during the surveys is provided in the Table B-1 of Appendix B of the ELMT report contained in DREIR *Technical Appendix C*.



In 2003, Governor Gray Davis declared a State of Emergency for the areas of Riverside, San Bernardino, and San Diego counties due to the imminent fire danger resulting from an infestation of bark beetles¹. The infestation resulted in the die-off of conifers and hardwoods thereby increasing the risk of fire in forested areas. According to the Forester's Report prepared for the Project site in March 2003, the number of on-site dead trees with a diameter breast height (DBH) of at least six inches that had been killed amounted to 50 trees². Additionally, approximately 200 dead trees with six inches DBH and smaller died due to overcrowding of trees on the Project site. Approximately 250 trees were removed from the Project site during this time in an attempt to preserve the approximately 3,719 unaffected onsite trees.

As a result of the bark beetle concern, the San Bernardino County Fire Department (SBCFD) initiated an ongoing Large Tree Removal Program to remove dead, dying, and diseased trees. In the new phase of the Large Tree Removal Program, the SBCFD partnered with the Natural Resources Conservation Service (NRCS) to remove other vegetation (both living and dead) from selected properties in the San Bernardino Mountains. This Program was implemented to reduce the rate of spread and intensity of potential wildfires. Under this Program, the tree and vegetation removal that occurred on the Project site took place during September and October of 2008. All work was reviewed and approved by a San Bernardino County registered professional Forester and the California Department of Forestry and Fire Protection prior to vegetation removal. Additionally, in September 2013, following the circulation of the previous iteration of the Draft EIR in 2010, approximately 12% of the ponderosa pine trees, 5% of the fir trees, 33% of the cedar, and 50% of other hardwood trees found on the Project site were removed pursuant to the SBCFD's Large Tree Removal Program.³

3.C.1.2 WILDLIFE

The vegetation communities that exist on the Project site and adjoining areas provide a functional ecosystem for a variety of wildlife species. The following discusses the wildlife species observed on the Project site during surveys conducted by ELMT between 2017 and 2018. Within this section, only common or non-sensitive species will be discussed. Discussion of sensitive species is provided below in Subsection 3.C.4, *Special-Status Species*, under Subsection 3.C.4.4, *Special-Status Wildlife Species*. A comprehensive list of the wildlife species observed or expected to occur in the vicinity of the Project site is provided in Table B-2 of Appendix B of the ELMT report contained in *Technical Appendix C*.

3.C.1.3 FISH

No fish were observed within the Project site during the field surveys conducted by ELMT. The existing drainage feature within the Project site contains a small amount of flowing water and does not support standing water for long periods of time that would be sufficient to support fish populations. Therefore, no fish are reasonably expected to occur and are presumed absent from the Project site.

¹ San Bernardino County Mountain Area Safety Taskforce, *Bark Beetle Emergency*: http://www.sbcounty.gov/calmast/bark_beetle_emg.asp

² Hatcher, John and Bridges, James, *Foresters Report for Church of the Woods Lake Arrowhead Christian School*, March 2003.

³ Department of Forestry and Fire Protection, *Church of the Woods Fuel Hazards Reduction Emergency Notice*, August 2013



3.C.1.4 AMPHIBIANS

No amphibians were observed within the Project site during the field surveys conducted by ELMT; however, the existing natural drainage system located within the Project site contains a small amount of flowing water that has the potential to provide a habitat for amphibians that do not require large bodies of water. Additionally, amphibians have the potential to burrow under leaf litter or aestivate below the surface within the vicinity of the drainage feature. Moreover, when surface water is available, amphibians may be present. The amphibian species most likely to occur when surface water is available include the Baja California tree frog (*Pseudacris hypochondriaca*), California treefrog (*Pseudacris cadaverina*), and the garden salamander (*Batrachoseps major major*). Other species of amphibians detected or observed on the Project site during previous field surveys include the Monterey ensatina (*Ensatina eschscholtzii eschscholtzii*).

3.C.1.5 REPTILES

Under existing conditions, the Project site is undeveloped and has the potential to support a wide variety of reptilian species adapted to the natural habitats on-site. The common reptilian species that are most likely to occur on-site include the California kingsnake (*Lampropeltis californiae*), western fence lizard (*Sceloporus occidentalis*), and Great Basin gopher snake (*Pituophis catenifer deserticola*). Other species of reptiles detected or observed on the Project site during previous field surveys include the alligator lizard (*Elgaria multicarinata*), western side-blotched lizard (*Uta stansburiana elegans*), southern sagebrush lizard (*Sceloporus graciosus vandenburgianus*), and Skilton's skink (*Plestiodon skiltonianus skiltonianus*).

3.C.1.6 BIRDS

The mixed conifer forest on the site provides foraging and cover habitat for year-round residents, seasonal residents, and migrating song birds. The overall condition of this community on the site is good and mostly undisturbed. Representative avian species observed during the ELMT surveys include the California scrub jay, American crow, Stellar's jay (*Cyanocitta stelleri*), mourning dove, mountain chickadee (*Parus gambeli*), northern flicker (*Colaptes auratus*), and western blue bird. Other common bird species that are anticipated to occur on-site include the red-tailed hawk, western wood pewee, and Nuttall's woodpecker. Other bird species that were detected or observed within the Project site during previous surveys include the brown creeper (*Certhia americana*), American robin (*Turdus migratorius*), dark-eyed junco (*Junco hyemalis*), acorn woodpecker (*Melanerpes formicivorus*), band-tailed pigeon (*Pentagona fasciata*), spotted towhee (*Pipilo maculatus*), yellow-rumped warbler (*Setophaga coronata*), red-breasted nuthatch (*Sitta canadensis*), white-breasted nuthatch (*Sitta carolinensis*), and black-headed grosbeak (*Pheucticus melanocephalis*). It should be noted that the California spotted owl was observed within the Project site during surveys conducted by Tanner Environmental Services in 2007 but have not been observed on-site during surveys since 2007.

3.C.1.7 MAMMALS

The Project site and surrounding areas contain habitat that is anticipated to support a variety of mammals. A number of mammal species were either directly observed or sign detected (track, scat, burrows, etc.) during the ELMT field surveys and previous surveys and include the mule deer (*Odocoileus hemionus*), western gray squirrel (*Sciurus griseus*), raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), deer mouse (*Peromyscus maniculatus*), Botta's pocket gopher (*Thomomys bottae*), and California black bear (*Ursus*



americanus). Other common species that are anticipated to occur on-site include the opossum (*Didelphis virginiana*), coyote (*Canis latrans*), bobcat (*Lynx rufus*), and Audubon's cottontail (*Sylvilagus audubonii*).

3.C.2 REGIONAL CONNECTIVITY/WILDLIFE MOVEMENT

3.C.2.1 OVERVIEW

Wildlife corridors link together areas of suitable habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. The fragmentation of open space areas by urbanization creates isolated "islands" of wildlife habitat. In the absence of habitat linkages that allow movement to adjoining open space areas, various studies have concluded that some wildlife species, especially the larger and more mobile mammals, will not likely persist over time in fragmented or isolated habitat areas because such conditions preclude the infusion of new individuals and genetic information into isolated populations (MacArthur and Wilson 1967, Soule 1987, Harris and Gallagher 1989).

Corridors effectively act as links between different populations of a species. A group of smaller populations (termed "demes") linked together via a system of corridors is termed a "metapopulation." The long-term health of each deme within the metapopulation is dependent upon its size and the frequency of interchange of individuals (immigration vs. emigration). The smaller the deme, the more important immigration becomes, because prolonged inbreeding with the same individuals can reduce genetic variability. Immigrant individuals that move into the deme from adjoining demes mate with individuals and supply that deme with new genes and gene combinations that increases overall genetic diversity. An increase in a population's genetic variability is generally associated with an increase in a population's health and long-term viability.

Corridors mitigate the effects of habitat fragmentation by: (1) allowing animals to move between remaining habitats, which allows depleted populations to be replenished and promotes genetic diversity; (2) providing escape routes from fire, predators, and human disturbances, thus reducing the risk that catastrophic events (such as fires or disease) will result in population or local species extinction; and (3) serving as travel routes for individual animals as they move within their home ranges in search of food, water, mates, and other needs (Noss 1983, Fahrig and Merriam 1985, Simberloff and Cox 1987, Harris and Gallagher 1989).

Wildlife movement activities usually fall into one of three movement categories: (1) dispersal (e.g., juvenile animals from natal areas, individuals extending range distributions); (2) seasonal migration; and (3) movements related to home range activities (foraging for food or water, defending territories, searching for mates, breeding areas, or cover). A number of terms have been used in various wildlife movement studies, such as "travel route," "wildlife corridor," and "wildlife crossing" that refer to areas in which wildlife move from one area to another. To clarify the meaning of these terms and facilitate the discussion on wildlife movement in this study, these terms are defined as follows:

Travel route: A landscape feature (such as a ridge line, drainage, canyon, or riparian strip) within a larger natural habitat area that is used frequently by animals to facilitate movement and provide access to necessary resources (e.g., water, food, cover, den sites). The travel route is generally preferred because it provides the least amount of topographic resistance in moving from one area to another; it contains adequate food, water, and/or cover while moving between habitat areas; and provides a relative direct link between target habitat areas.



Wildlife corridor: A piece of habitat, usually linear in nature, that connects two or more habitat patches that would otherwise be fragmented or isolated from one another. Wildlife corridors are usually bounded by urban land areas or other areas unsuitable for wildlife. The corridor generally contains suitable cover, food, and/or water to support species and facilitate movement while in the corridor. Larger, landscape-level corridors (often referred to as “habitat or landscape linkages”) can provide both transitory and resident habitat for a variety of species.

Wildlife crossing: A small, narrow area, relatively short in length and generally constricted in nature, that allows wildlife to pass under or through an obstacle or barrier that otherwise hinders or prevents movement. Crossings typically are man-made and include culverts, underpasses, drainage pipes, and tunnels to provide access across or under roads, highways, pipelines, or other physical obstacles. These are often “choke points” along a movement corridor.

3.C.2.2 WILDLIFE MOVEMENT WITHIN THE STUDY AREA

As previously described, wildlife movement activities usually fall into one of three movement categories: (1) dispersal (e.g., juvenile animals from natal areas, or individuals extending range distributions); (2) seasonal migration; and (3) movements related to home range activities (foraging for food or water, defending territories, searching for mates, breeding areas, or cover). Although the nature of each of these types of movement are species specific, large open spaces will generally support a diverse wildlife community representing all types of movement. Each type of movement may also be represented at a variety of scales from non-migratory movement of amphibians, reptiles, and some birds, on a “local” level to many square mile home ranges of large mammals moving at a “regional” level. The location of the study area supports all types of wildlife movement on some scale.

Movement on a smaller or “local” scale occurs throughout the surrounding vicinity as well as within the study area itself. Data gathered from biological surveys indicate that the study area contains habitat that supports a variety of species of invertebrates, amphibians, reptiles, birds, and mammals. The home range and average dispersal distance of many of these species may be entirely contained within the study area and immediate vicinity. Populations of animals such as insects, amphibians, reptiles, small mammals, and a few bird species may find all their resource requirements without moving far or outside of the study area at all. Occasionally, individuals expanding their home range or dispersing from their parental range will attempt to move outside of the study area.

The Project site is within the northwest portion of, and is immediately adjacent to, the Strawberry Creek Open Space Corridor as depicted within the San Bernardino County General Plan Open Space Element Valley and Mountain Areas Overlay Map⁴ and on Exhibit 7, *Wildlife Corridors*, of the ELMT Biology Report. This corridor provides movement opportunities between the San Bernardino National Forest and the Mojave River. Additionally, the Strawberry Creek Corridor provides an area for wildlife to utilize while traversing the San Bernardino Mountains to City Creek, and vice versa. The corridor does not connect with the small stream that occurs in the northern portion of the Project site and flows down to Daley Canyon and off the Project site.

⁴ San Bernardino County General Plan Open Space Element, available at: <http://cms.sbcounty.gov/Portals/5/Planning/ZoningOverlaymaps/OpenSpaceValleyMtn.pdf>



However, this stream does represent one possible travel route for wildlife on and off the site. The Project site has the potential to support the movement of mule deer, bobcat, coyote, and black bear through the Project site and its surrounding areas.

3.C.3 JURISDICTIONAL “WATERS OF THE U.S./STATE”

There are three key agencies that regulate activities within inland streams, wetlands, and riparian areas in California which include the Regulatory Branch of the U.S. Army Corps of Engineers (ACOE), the Regional Water Quality Control Board (RWQCB), and the California Department of Fish and Wildlife (CDFW). The Corps regulate discharge of dredge or fill materials into “water of the United States” pursuant to Section 404 of the Federal Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act. The RWQCB, a State agency, regulates discharges to surface waters pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act. The CDFW, a State agency, regulates alteration to streambeds and associated plant communities under Section 1600 *et seq.* of the California Fish and Game Code.

A single drainage feature was observed within the southwest corner of the Project site during the field surveys. The drainage feature flows off-site north of the Project site into a 9.81-acre area that was recently deeded to the San Bernardino County Flood Control for their Rimforest Storm Drain Project. This on-site drainage system is tributary to Little Bear Creek and Lake Arrowhead. Accordingly, this drainage feature possesses a surface hydrologic connection downstream of “waters of the United States/waters of the State” and falls under the regulatory authority of the Corps, RWQCB, and CDFW.

Approximately 0.5 acre of Corps/RWQCB jurisdiction of non-wetland waters and approximately 0.10 acre of CDFW streambed/riparian land are located within the proposed Project’s development footprint. Nonetheless, the Rimforest Storm Drain project is expected to be implemented by San Bernardino County prior to Project development, which would include a pipeline facility within the jurisdictional waters found on and off the Project site that would permanently alter and eliminate the Corps and CDFW jurisdictional waters found on the Project site under existing conditions.

3.C.4 SPECIAL-STATUS SPECIES

The following describes the plant and wildlife species present or potentially present within the Project site and vicinity which have been afforded special recognition by local, State, and/or federal resource conservation agencies and organizations. Also discussed are habitats that are unique, of relatively limited distribution, or of particular value to wildlife.

Protected special-status species are classified by either State or federal resource management agencies, or both, as threatened or endangered, under provisions of the State and federal Endangered Species Acts (FESA) described below. The USFWS, CDFW, and special groups such as the California Native Plant Society (CNPS), maintain watch lists of such resources. Vulnerable or “at-risk” species that are proposed for listing as threatened or endangered (and thereby for protected status) are categorized administratively as “candidates” by the USFWS. The CDFW uses various terminology and classifications to describe vulnerable species. There are additional sensitive species classifications applicable in California which is also described below.



3.C.4.1 EXPLANATION OF SENSITIVE RESOURCE CLASSIFICATION

A. Federal Protection and Classifications

FESA defines an endangered species as “any species which is in danger of extinction throughout all or a significant portion of its range.” A threatened species is defined as “any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.” Under provisions of Section 9(a)(1)(B) of the FESA it is unlawful to “take” any listed species. “Take” is defined in Section 3(18) of FESA: “...harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” Further, the USFWS, through regulation, has interpreted the terms “harm” and “harass” to include certain types of habitat modification as forms of “take.” These interpretations, however, are generally considered and applied on a case-by-case basis and often vary from species to species. In a case where a property owner seeks permission from a Federal agency for an action which could affect a Federally-listed plant and animal species, the property owner and agency are required to consult with USFWS. Section 9(a)(2)(b) of the FESA addresses the protections afforded to listed plants.

Within the last ten years the USFWS instituted changes in the listing status of candidate species abandoning the C1/C2 model. Former C1 candidate species are now considered Federal candidate species (FC). All references to federally protected species in this report include the most current published status to which each species has been assigned by USFWS.

For purposes of this assessment the following acronyms are used for Federal status species:

- FE** – Federally listed as Endangered;
- FT** – Federally listed as Threatened;
- FPE** – Federally proposed for listing as Endangered;
- FPT** – Federally proposed for listing as Threatened;
- FPD** – Federally proposed for delisting; and
- FC** – Federal candidate species (former Category 1 candidates).

B. State of California Protection and Classifications

California’s Endangered Species Act (CESA) defines an endangered species as “a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease.” The State defines a Threatened species as “a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter. Any animal determined by the commission as rare on or before January 1, 1985 is a Threatened species.” Candidate species are defined as “a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the commission has formally noticed as being under review by the department for addition to either the list of Endangered species or the list of Threatened species, or a species for which the commission has published a notice of proposed regulation to add the species to either list.” Candidate species may be afforded temporary protection as though they were already listed as threatened or endangered at the discretion of the CDFW. Unlike the FESA, CESA does not include listing provisions for invertebrate species.



Article 3, Sections 2080 through 2085, of the CESA addresses the taking of Threatened or Endangered species by stating “No person shall import into this state, export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the commission determines to be an endangered species or a threatened species, or attempt any of those acts, except as otherwise provided.” Under the CESA, “take” is defined as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” Exceptions authorized by the state to allow “take” require permits or memoranda of understanding and can be authorized for “Endangered species, Threatened species, or candidate species for scientific, educational, or management purposes.” Sections 1901 and 1913 of the *Fish and Game Code* provide that notification is required prior to disturbance.

Additionally, some sensitive mammals and birds are protected by the State as Fully Protected Mammals or Fully Protected Birds, as described in the *Fish and Game Code*, Sections 4700 and 3511, respectively. California Species of Special Concern are species designated as vulnerable to extinction due to declining population levels, limited ranges, and/or continuing threats. This list is primarily a working document for the CDFW’s CNDDDB project. Informally listed taxa are not protected per se, but warrant consideration in the preparation of biotic assessments. For some species, the CNDDDB is only concerned with specific portions of the life history, such as roosts, rookeries, or nest sites.

For the purposes of this assessment, the following acronyms are used for state status species:

- SE** – State listed as Endangered;
- ST** – State listed as Threatened;
- SR** – State listed as Rare;
- SCE** – State candidate for listing as Endangered;
- SCT** – State candidate for listing as Threatened;
- SFP** – State Fully Protected; and
- CSC** – California Species of Special Concern.

C. California Native Plant Society

The CNPS is a private plant conservation organization dedicated to the monitoring and protection of sensitive species in California. CNPS has compiled an inventory comprised of the information focusing on geographic distribution and qualitative characterization of rare, threatened, or endangered plant species of California (CNPS 2001). The list serves as the candidate list for listing as threatened and endangered by CDFW. CNPS has developed five categories of rarity:

- List 1A** – Presumed extinct in California;
- List 1B** – Rare or Endangered in California and elsewhere;
- List 2** – Rare or Endangered in California, more common elsewhere;
- List 3** – Plants for which we need more information – Review list; and
- List 4** – Plants of limited distribution – Watch list.

The CNPS recently added “threat ranks” which parallel the ranks used by the CNDDDB. These ranks are added as a decimal code after the CNPS List (e.g., List 1B.1). The threat codes are as follows:



1. Seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat);
2. Fairly endangered in California (20-80% occurrences threatened);
3. Not very endangered in California (<20% of occurrences threatened or no current threats known).

Sensitive species that occur or potentially could occur within the study area are based on one or more of the following: (1) the direct observation of the species within the study area during one of the biological surveys; (2) a record reported in the CNDDDB; and (3) the study area is within known distribution of a species and contains appropriate habitat.

D. Resource Agency Policies and Regulations

The National Forest Management Act (NFMA) of 1976 and its implementing regulations require the Forest Service to ensure a diversity of animal and plant communities and maintain viable populations of existing native species as part of their multiple use mandates. The USDA Forest Service sensitive species program is a proactive approach to conserving species, to ensure the continued existence of viable, well-distributed populations, and to maintain biodiversity of National Forest Service lands (USDA Forest Service 2004). In addition, the Secretary of Agriculture's policy on fish and wildlife (Department Regulation 9500-4) directs the Forest Service to avoid actions "which may cause a species to become threatened or endangered."

Forest Service Manual 2670 directs the Forest Service to avoid or minimize impacts to any species whose viability is a concern, analyze the significance of potential adverse effects (if impacts cannot be avoided), and develop management practices to ensure that species do not become endangered or threatened due to forest service actions (San Bernardino National Forest Guidelines for Consultants).

The USDA Forest Service defines sensitive species as those animal and plant species identified by a regional forester for which population viability is a concern. This may be a result of significant current or predicted downward trends in habitat that would reduce a species' existing distribution or significant current or predicted downward trends in density or population numbers (CNDDDB 2006, Special Animals List).

The San Bernardino National Forest Land and Resource Management Plan's standards and guidelines involving Wildlife, Threatened, Endangered, and Sensitive Species (SG57-59 and SG65-67) include (but are not limited to) the following:

- Fully mitigate for unavoidable impacts to threatened and endangered species and riparian habitat;
- Emphasize sensitive species habitat protection;
- Protect cliffs occupied by threatened and endangered cliff-nesting raptors during the nesting season;
- Permit no activities which may adversely alter surface or subsurface hydrology or meadow habitat which support sensitive plants.

The San Bernardino National Forest Land and Resource Management Plan's standards and guidelines involving Riparian Areas and Wetlands (SG42-44) include (but are not limited to) the following:

- Fully mitigate for adverse impacts to riparian areas from uses and activities;



- Manage for riparian-dependent species;
- Maintain herbaceous cover (riparian vegetation) in a good to excellent condition;
- Protect and enhance riparian areas giving emphasis to riparian dependent resources.

The Project site falls within the San Bernardino Watershed and Watershed Wildlife Management Emphasis Zone. The Management goals for the Watershed area are to “maintain and enhance watershed integrity, to protect on-site and downstream values, and to sustain land productivity. Enhance watershed viability and health through sediment management. Use vegetation management to maintain health of stands, provide for protection through fuels management, and increase water yield, as appropriate” (San Bernardino National Forest Land and Resource Management Plan). The Management goals for the Watershed/Wildlife area are to “Manage and maintain or enhance watershed integrity and health through the active sediment management program. Provide for high levels of habitat for emphasis species through vegetation management activities, in stream improvements for fisheries and other habitat improvements. Manage for increased water yields as opportunities become available.” (San Bernardino National Forest Land and Resource Management Plan).

3.C.4.2 SENSITIVE PLANT COMMUNITIES

In addition to the presence of the mixed coniferous forest and riparian habitat, communities that are relatively common in the area, several sensitive plant communities were reported in the CNDDDB from the vicinity. However, no sensitive plant communities identified by the CNDDDB as potentially present, including Riversidian alluvial fan sage scrub, southern sycamore alder riparian woodland, southern mixed riparian forest, southern California threespine stickleback stream, and pebble plains, occur on the Project site. A summary of special-status plant species recognized by the CNDDDB in the vicinity and ELMT as potentially occurring on the Project site is presented on Table C-1, *Potentially Occurring Special Status Biological Resources*, in Appendix C of the ELMT report included in DREIR *Technical Appendix C*.

3.C.4.3 SPECIAL-STATUS PLANT SPECIES

The CNDDDB and California Native Plant Society (CNPS) recorded twenty-one special-status plant species in the Harrison Mountain, Lake Arrowhead, San Bernardino North, and Silverwood Lake USGS 7.5-minute quadrangles. The Thomas Leslie Corporation (TLC) conducted twenty-five botanical surveys within the Project site over a three-year period from 2001 to 2003. No special-status plant species were observed on-site during the twenty-five surveys over the three-year span. Additionally, no special-status plant species were observed during the field surveys conducted by ELMT in 2017 and 2018. A summary of special-status plant species recognized by the CNDDDB in the vicinity and ELMT as potentially occurring on the Project site is presented on Table C-1, *Potentially Occurring Special Status Biological Resources*, in Appendix C of the ELMT report included in DREIR *Technical Appendix C*.

Based on habitat requirements for specific special-status plant species and the availability and quality of habitats needed by each species, it was determined that the Project site has the potential to support two CNPS list B1 plant species: Palmer’s mariposa-lily (*Calochortus palmeri* var *palmeri*) and lemon lily (*Lilium parryi*). Both species occur within the damp soils associated with montane coniferous forest. While the soil on the Project site has the potential to support both plant species, neither species were observed on the Project site during the sensitive plant surveys conducted during the 2018 blooming season. Furthermore, all remaining



special-status plant species are presumed to be absent from the Project site based on habitat requirements, the availability and quality of habitat required for each species, and known distributions.

3.C.4.4 SPECIAL-STATUS WILDLIFE SPECIES

Sensitive wildlife species include those listed, or are candidates for listing by the USFWS and CDFW, and CDFW species of special concern.⁵ Several special-status wildlife species were reported in the CNDDDB from the vicinity. A summary of sensitive wildlife species recognized by the CNDDDB and ELMT as observed or potentially present on the Project site is presented in Table C-1, *Potentially Occurring Special Status Biological Resources*, in Appendix C of the ELMT report included in DREIR *Technical Appendix C*. All sensitive species with at least a moderate potential of occurring on-site are indicated as such in the table. Some species are not expected on-site due to the lack of suitable habitat. In a few cases, comments are provided as further explanation.

No special-status wildlife species were directly observed during the ELMT field surveys; however, based on habitat requirements for specific species and the availability and quality of habitats needed by each species, the Project site possesses a low to moderate potential to support the San Bernardino flying squirrel, southern rubber boa, and California spotted owl; and a low potential to support the olive-sided flycatcher (*Contopus cooperi*), purple martin (*Progne subis*), long-eared owl (*Asio otus*), bald eagle (*Haliaeetus leucocephalus*), California mountain kingsnake (*Lampropeltis zonata [parvirubra]*), and white-eared pocket mouse (*Perognathus alticolus alticolus*). All remaining special-status wildlife species identified in the CNDDDB are presumed to be absent from the Project site based on habitat requirements, the availability and quality of habitat required by each species, and known distributions.

3.C.5 REGULATORY FRAMEWORK

As part of the proposed Project's environmental review and approval, there are a number of performance criteria and standard conditions that must be met. Among these are those that relate to Federal and State regulating agencies for impacts to wetlands, riparian habitats, and stream courses and local policies related to bark beetle infestation, impacts to native plants and trees, and open space designations and wildlife movement corridors.

3.C.5.1 FEDERAL

A. Federal Clean Water Act, Section 404

Section 404 of the Clean Water Act (CWA) regulates the discharge of dredged material, placement of fill material, or excavation within "waters of the United State." and authorizes the Secretary of the Army, through the Corps of Engineers, to issue permits for such actions. "waters of the United States" are defined by the CWA as "rivers, creeks, streams, and lakes extending to their headwaters and any associated wetlands." Wetlands are defined by the CWA as "areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions." The permit review process entails an assessment of potential adverse impacts to ACOE

⁵ California Department of Fish and Game, Biogeographic Data Branch, California Natural Diversity Database. February 2008. *Special Animals*. 60 pp.



jurisdictional “waters of the United States” and wetlands. In response to the permit application, the ACOE will also require conditions amounting to mitigation measures if necessary. Where a Federally-listed species may be affected, they will also require Section 7 consultation with the USFWS under the FESA. Through this process, potentially significant adverse impacts within the Federal jurisdictional limits could be mitigated to a level that is less than significant.

B. Federal Clean Water Act, Section 401

The mission of the California Regional Water Quality Control Board (RWQCB) is to develop and enforce water quality objectives and implement plans that will best protect the beneficial uses of the State’s waters, recognizing local differences in climate, topography, geology, and hydrology. Section 401 of the CWA requires that:

“any applicant for a Federal permit for activities that involve a discharge to waters of the State, shall provide the Federal permitting agency a certification from the State in which the discharge is proposed that states that the discharge will comply with the applicable provisions under the Federal Clean Water Act.”

Therefore, before the ACOE will issue a Section 404 permit, applicants must apply for and receive a Section 401 water quality certification from the RWQCB. A complete application for 401 Certification will include a detailed Water Quality Management Plan that will address the key water quality features of the Project to ensure the integrity of water quality in the area during and post-construction.

Under separate authorities granted by State law (i.e., the Porter-Cologne Water Quality Control Act), a RWQCB may choose to regulate discharges of dredge or fill materials by issuing or waiving (with or without conditions) Waste Discharge Requirements (WDRs), a type of State discharge permit, instead of taking a water quality certification action. Processing of a WDR is similar to that of a Section 401 certification; however, the RWQCB has slightly more discretion to add conditions to a project under the Porter-Cologne Act than under the Federal CWA.

C. Migratory Bird Treaty Act (16 USC Section 703-712)

The Migratory Bird Treaty Act (MBTA) makes it illegal for anyone to take, possess, import, export, transport, sell, purchase, barter, or offer for sale, purchase, or barter, any migratory bird, or the parts, nests, or eggs of such a bird except under the terms of a valid permit issued pursuant to federal regulations. The migratory bird species protected by the MBTA are listed in 50 CFR Section 10.13. The USFWS has statutory authority and responsibility for enforcing the MBTA (16 U.S.C. 703-712). The MBTA implements Conventions between the United States and four countries (Canada, Mexico, Japan, and Russia) for the protection of migratory birds. (USFWS, 2015)

Nesting birds are protected by the Migratory Bird Treaty Act (MBTA)



3.C.5.2 STATE

A. State of California Fish and Game Code, Section 1602

Section 1602 of the *Fish and Game Code* requires any entity (e.g., person, State or local government agency, or public utility) who proposes a project that will substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake, to notify CDFG of the proposed Project. In the course of this notification process, the CDFG will review the proposed Project as it affects streambed habitats within the study area. The CDFG may then place conditions on the Section 1602 clearance to avoid, minimize, and mitigate any potentially significant adverse impacts within CDFG jurisdictional limits.

3.C.5.3 REGIONAL

A. Bark Beetle Infestation and Large Tree Removal Program

The County of San Bernardino Board of Supervisors (the Board) has declared a state of emergency in the County's forested areas due to the infestation of the western pine beetle (*Dendroctonus brevicomis*) and the elevated risk of fire.⁶ In response to this emergency, the Board approved a bark beetle action plan that utilizes both federal and local funding for removing dead trees and minimizing fire danger. The goal of the bark beetle action plan is summarized below:

- Mapping of mountain areas to prioritize tree removal;
- Removal of dead trees and debris primarily along fire excavation routes;
- Purchase of a wood chipper, two incinerator devices, and a log loader; and,
- Development of a public education campaign with the possibility of creating additional local funding for tree removal on private lands.

The SBCFD has an ongoing Large Tree Removal Program to assist property owners with the removal of dead, dying, and diseased trees from the San Bernardino Mountains. In addition to tree removal, under a new phase of the Program SBCFD and NRCS would remove other vegetation, living and dead, as an effort to further reduce fire hazards in the San Bernardino Mountains. The methods used to reduce the forest fuels include the following:

- Thinning of excess trees 10 inches or less in diameter, which are generally those in dense clumps or directly underneath large overtopping trees;
- Removing or thinning of dense areas of brush species, with a priority for removing dead brush;
- Pruning of live limbs of trees up to 8 feet from the ground from trees 12-inches high or taller;

⁶ County of San Bernardino, News: County Encouraged by State's Action on Forest Disaster, April 16, 2003.

(Footnote continued on next page)



- Any live fuels selected for treatment shall be reviewed and approved by a County of San Bernardino Registered Professional Forester and the California Department of Forestry and Fire Protection prior to removal.⁷

As further specified under the County's Landscaping Ordinance, any landscaping within the Mountain Region will require the preparation of an insect infestation prevention program by a Registered Professional Forester (RFP) and felled trees will require treatment to protect against insect damage and disease.⁸

B. Tree Protection

Because the Project site is comprised of undeveloped forest land, the County's Plant Protection and Management Ordinance is applicable.⁹ The Plant Protection and Management Ordinance provides regulations and guidelines for the management of plant resources for the following purposes:

- To promote and sustain the health, vigor, and productivity of plant life and aesthetic values within the County through appropriate management techniques.
- To conserve the native plant life heritage for the benefit of all, including future generations.
- To protect native trees and plants from indiscriminate removal, and to regulate such activity.
- To provide a uniform standard for appropriate removal of native trees and plants in public and private places and streets to promote conservation of these valuable natural resources.
- To protect and maintain water productivity and quality in local watersheds.
- To preserve habitat for rare, endangered or threatened plants and protect animals with limited or specialized habitats.¹⁰

Under this ordinance, a Tree or Plant Removal Permit is required for regulated trees and plants including native trees with a six inch or greater stem diameter or 19 inches in circumference measure 4.5 feet above natural grade level and riparian plants within 200 feet of the bank of a stream as shown on USGS topographic maps as perennial or intermittent, blue or brown lines (solid or dashed), and river wash areas.¹¹ This permit can be considered part of an approved land use application or development permit, if the application provided sufficient information to determine the extent of any proposed native tree or plant removal. This determination is based, in part, on the finding that the removal of a native tree or plant is justified if the location of the native tree or plant interferes with an allowed structure, or other approved improvements, or ground disturbing activity. The following additional findings are required for tree removal in the Mountain Region: (1) 20% of commercial, industrial, and/or administrative/professional uses will be maintained or established in a natural condition; (2) One half of all natural areas will be located so that significant portions are visible from the public

⁷ Frank Losekoot, County Forester, San Bernardino County Fire Department, Office of the Fire Marshal, Fire Hazard Abatement, correspondence dated January 17, 2008.

⁸ County of San Bernardino 2007 Development Code, Section 83.10.080(b) and Section 88.01.090.

⁹ County of San Bernardino 2007 Development Code, Chapter 88.01, Plant Protection and Management.

¹⁰ County of San Bernardino 2007 Development Code, Section 88.01.010, Purpose.

¹¹ County of San Bernardino 2007 Development Code, Sections 88.01.070(b)(1) and 88.01.080(b).

(Footnote continued on next page)



right-of-way; (3) an RFP has certified that the removal of a regulated tree will contribute to the overall health of the remaining stand of trees.¹² Prior to the issuance of a Tree or Plant Removal Permit, a plot plan indicating which trees are authorized for removal shall be approved by the appropriate County Review Authority.¹³ The County's Landscaping Ordinance also requires the preparation of a forest conservation plan by an RFP for projects located within the Mountain Region.¹⁴

In addition to following the San Bernardino County's Plant Protection and Management Ordinance and Landscaping Ordinance, protective measures will be implemented during construction for high value trees which could be damaged by construction activities due to their proximity to road and facility clearing limits.¹⁵ Tree Protection Guidelines, established by Tree City USA,¹⁶ have been adopted for implementation by an ISA Certified Arborist or Registered Professional Forester and are summarized below:¹⁷

- Place protective barriers around trees;
- Reduce soil compaction by limiting ground disturbing activities to dry summer and early fall;
- Limit the use of heavy equipment outside of construction areas;
- Keep heavy equipment and concrete and asphalt pads outside the dripline of existing trees;
- Keep fill material over six inches deep outside the dripline of existing trees, and barrier walls where fill is necessary;
- Keep foundation footing outside the dripline of existing trees and consult with an ISA Certified Arborist or Registered Professional Forester if not possible;
- Avoid contact between underground utility lines and tree roots;
- Repair damaged tree roots larger than two inches in diameter by creating a clean cut and applying a tree seal;
- Place plastic or chemical root barriers between foundation footing and roots;
- Keep grading cuts greater than two inches deep outside the dripline of existing trees and place mulch in areas of minor grading;
- Prevent dumping of concrete and masonry materials under the dripline of existing trees and prevent washing of delivery trucks on the Project site; and,
- Follow ISA Pruning Standards for necessary pruning of residential trees.

¹² County of San Bernardino 2007 Development Code, Section 88.01.050(f)(2).

¹³ County of San Bernardino 2007 Development Code, Section 88.01.050(g), Plot Plan Requirements.

¹⁴ County of San Bernardino 2007 Development Code, Section 83.10.080(b).

¹⁵ County of San Bernardino 2007 Development Code, Chapter 83.10, Landscaping Standards.

¹⁶ Tree City USA, sponsored by The National Arbor Day Foundation in cooperation with the USFS and the National Association of State Foresters, provides direction, technical assistance, public attention, and national recognition for urban and community forestry programs throughout the United States.

¹⁷ Hatcher, John and Bridges, James, Foresters Report for Church of the Woods Lake Arrowhead Christian School, March 2003.

(Footnote continued on next page)



C. Open Space and Wildlife Corridors

The Open Space Element of the County of San Bernardino General Plan includes a plan to protect the major open space areas throughout the County. These areas are identified in a Plan of Open Space and Trails for the County of San Bernardino.¹⁸ This Plan was created to balance urban development with the protection of natural resources and other open space uses including recreation, agriculture, preserving health and safety, scenic resources, and trails. Wildlife corridors are also shown on the Open Space Overlay Map.¹⁹ The Conservation Element of the General Plan includes goals, policies and programs to protect wildlife corridors and recommends the creation of a specific and detailed wildlife corridor map.²⁰

The Conservation Element of the Lake Arrowhead Community Plan also identifies the Strawberry Creek Wildlife Corridor as an important open space area that provides for wildlife movement and other important linkage values. Therefore, projects should be designed to minimize impacts to this corridor.²¹

3.C.6 THRESHOLDS OF SIGNIFICANCE

In the development of significance thresholds for impacts to biological resources, CEQA provides guidance primarily in Section 15065, Mandatory Findings of Significance, and the CEQA Guidelines, Appendix G, Environmental Checklist Form. Section 15065(a) states that a project may have a significant effect where:

“The project has the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or wildlife community, reduce the number or restrict the range of an endangered, rare, or threatened species...”

Appendix G of the CEQA Guidelines is more specific in addressing biological resources and encompasses a broader range of resources to be considered, including: candidate, sensitive, or special status species; riparian habitat or other sensitive natural communities; federally protected wetlands; fish and wildlife movement corridors; local policies or ordinances protecting biological resources; and, adopted Habitat Conservation Plans (HCPs). This is done in the form of a checklist of questions to be answered during the Initial Study leading to the preparation of the appropriate environmental documentation for a project (i.e., Negative Declaration, Mitigated Negative Declaration, or EIR). Because these questions are derived from standards in other laws, regulations, and other commonly used thresholds, it is reasonable to use these standards as a basis for defining significance thresholds in an EIR. Therefore, for the purpose of this analysis, impacts to biological resources are considered potentially significant (before considering offsetting mitigation measures) if one or more of the following conditions would result from implementation of the proposed Project.

¹⁸ County of San Bernardino, *A Plan of Open Space and Trails for the County of San Bernardino*, 1991.

¹⁹ San Bernardino County Land Use Plan, *General Plan Open Space Element*, available at: <http://www.co.san-bernardino.ca.us/landuseservices/General%20Plan%20Update/Mapping/Default.asp>

²⁰ County of San Bernardino 2007 General Plan, *Conservation Element*, adopted March 13, 2007, pages V-14 and V-15.

²¹ County of San Bernardino, *Lake Arrowhead Community Plan*, adopted March 13, 2007, Policy LA/CO 1.1, page 53.



- a. *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 California Department of Fish and Wildlife or US Fish and Wildlife Service.*
- b. *Have substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service.*
- c. *Have substantial adverse effect on State or Federal-protected wetlands as defined by Section 404 of the Clean Water Act (including but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.*
- d. *Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.*
- e. *Conflict with any approved or adopted local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.*
- f. *Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, state habitat conservation plan.*

3.C.7 ENVIRONMENTAL IMPACTS

3.C.7.1 METHODOLOGY

The following discussion examines potential impacts to plant and wildlife resources that may occur as a result of implementation of the proposed Project. For the purpose of this assessment Project-related impacts take two forms, direct and indirect. Direct impacts are considered to be those that involve the loss, modification or disturbance of natural habitats (i.e., vegetation or plant communities), which in turn, directly affect plant and wildlife species dependent on that habitat. Direct impacts also include the destruction of individual plants or wildlife, which is typically the case in species of low mobility (i.e., plants, amphibians, reptiles, and small mammals). The collective loss of individuals in these manners may also directly affect regional population numbers of a species or result in the physical isolation of populations thereby reducing genetic diversity and, hence, population stability.

Indirect impacts are considered to be those that involve the effects of increases in ambient levels of sensory stimuli (e.g., noise, light), unnatural predators (e.g., domestic cats and other non-native animals), and competitors (e.g., exotic plants, non-native animals). Indirect impacts may be associated with the construction and/or eventual habitation/operation of a project; therefore, these impacts may be both short-term and long-term in their duration. These impacts are commonly referred to as “edge effects” and may change the behavioral patterns of wildlife and reduce wildlife diversity and abundance in habitats adjacent to project sites.

The determination of impacts in this analysis is based on both the features of the proposed Project and the biological values of the habitat and/or sensitivity of plant and wildlife species. Relevant Project features (e.g., limits of grading) are based on the site plans included in Section 2, *Project Description* of this DREIR and information supplied by the Project’s engineer (W.J. McKeever, Inc.) Project design features that avoid or preserve biological resources are taken into consideration and specifically described below prior to the assessment of potential adverse impacts.



The biological values of resources within, adjacent to, and outside the area to be affected by the Project were determined by consideration of several factors. These included the overall size of habitats to be affected, the site's previous land uses and disturbance history, the site's surrounding environment and regional context, the on-site biological diversity and abundance, the presence of sensitive and special-status plant and wildlife species, the site's importance to regional populations of these species, and the degree to which on-site habitats are limited or restricted in distribution on a regional basis and, therefore, are considered sensitive in themselves. Whereas this assessment is comprehensive, the focus is on sensitive plant communities/habitats, resources that play an important role in the regional biological systems, and special-status species.

The environmental impacts relative to biological resources are assessed using impact significance threshold criteria which mirror the policy statement contained in CEQA, Section 21001(c) of the *Public Resources Code*. Accordingly, the State Legislature has established it to be the policy of the State to:

“Prevent the elimination of fish or wildlife species due to man’s activities, ensure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities...”

For the purposes of this impact analysis the following definitions apply:

- “Substantial adverse effect” means loss or harm of a magnitude which, based on current scientific data and knowledge would: (1) substantially reduce population numbers of a species; (2) substantially reduce the distribution of a natural community/habitat type; or (3) eliminate the functions and values of a biological resource (e.g., streams, wetlands, or woodlands) in a geographical area defined by interrelated biological components and systems. In the case of this analysis the prescribed geographical area is considered to be the region including the San Bernardino National Forest east of Interstate 15, and to the Banning Pass, north of Interstate 10.
- “Conflict” means contradiction of a magnitude, which based on foreseeable circumstances would preclude or prevent substantial compliance.
- “Rare” means: (1) that the species exists in such small numbers throughout all, or a significant portion of, its range that it may become endangered if its environment worsens; or (2) the species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and may be considered “threatened” as that term is used in the FESA.

Those impacts determined to be less than significant included impacts to biological resources that are relatively common or exist in a degraded or disturbed state, rendering them less valuable as habitat, or impacts that do not meet or exceed the significance thresholds. Also, conclusions are based on conditions of species ecology and the resource's regional distribution and status, the incorporation of Project design features, and the compliance with laws and regulations discussed previously under Regulatory Setting.



3.C.8 IMPACT ANALYSIS

Threshold a) *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 California Department of Fish and Wildlife or US Fish and Wildlife Service?*

1. Southern Rubber Boa

The Project site is located within the boundaries of historic southern rubber boa habitat.²² Although no sensitive reptile species were observed in the study area, the study area does support potential southern rubber boa habitat. A habitat suitability assessment was conducted by Leatherman BioConsulting, Inc. on January 25, 2018, which determined that the Project site contains approximately 1.65 acres of high-quality habitat in the northeast corner; approximately 2.18 acres of moderate quality habitat in the western portion; and the remaining portions of the site contain approximately 18.21 acres of low quality and approximately 5.08 acres of unsuitable habitat for the southern rubber boa. Development of the Project would result in impacts to approximately 8.64 acres of low-quality southern rubber boa habitat.

The southern rubber boa is a State-listed threatened species that is an uncommon resident in montane conifer communities. The southern rubber boa is not likely to occur within the development footprint of the Project site. However, based on the known habitat requirements of the species and the proximity to known populations, this species may be present on-site and may be impacted by proposed construction and related human activities. Therefore, impacts to this sensitive species are considered potentially significant and mitigation is required.

2. San Bernardino Flying Squirrel

The San Bernardino flying squirrel was observed within the boundaries of the Project site during trapping surveys conducted in 2003. However, the most recent trapping surveys conducted in 2007 by PCR Services Corporation did not observe the species on the Project site or in the Project site's vicinity. In February 2018, ELMT conducted a habitat suitability assessment and determined that there is no area on-site that was determined to possess high quality San Bernardino flying squirrel habitat. The ELMT habitat assessment did determine approximately 10.07 acres of moderate quality habitat that occurs in the northern and eastern portions of the Project site. The remaining portions of the site contain approximately 10.51 acres of low-quality habitat and approximately 6.54 acres of unsuitable habitat for the species. Development of the Project would result in impacts to approximately 2.56 acres of low-quality habitat and approximately 4.61 acres of moderate quality San Bernardino flying squirrel habitat.

The San Bernardino flying squirrel is a State-listed species of concern that has a high potential to occur within the Project site's vicinity. The San Bernardino flying squirrel is not likely to occur within the development footprint of the Project. However, based on the known habitat requirements of the species and the proximity to known populations, this species may be present on-site and may be impacted by proposed construction and related human activities. Therefore, impacts to this sensitive species are considered potentially significant and mitigation is required.

²² San Bernardino County Official Land Use Plan, General Plan Biotic Resource Overlay, available at: <http://www.co.san-bernardino.ca.us/landuseservices/General%20Plan%20Update/Mapping/Default.asp>



3. *California Spotted Owl*

Tanner Environmental Services performed a presence/absence and reproductive survey for the California spotted owl for the Project between March 30 and June 6, 2007. During the survey, one male California spotted owl was observed foraging within the southeast portion of the Project site; however, the male was not found either roosting or nesting on the Project site. In February 2018, ELMT conducted a habitat assessment for the California spotted owl and determined that the Project site contains approximately 10.47 acres of moderate quality habitat located in the northeastern portion. The remainder of the Project site contains approximately 10.11 acres of low-quality habitat and approximately 7.10 acres of unsuitable habitat. Development of the Project would result in impacts to approximately 2.56 acres of low-quality habitat and approximately 4.61 acres of moderate habitat.

This is a State-listed species of concern and has a high potential to occur within the Project's vicinity. The California spotted owl is not likely to occur within the development footprint of the Project site. However, based on the known habitat requirements of the species and the proximity to known populations, this species may be present on-site and may be impacted by proposed construction and related human activities. Therefore, impacts to this sensitive species are considered potentially significant and mitigation is required.

4. *Nesting Birds*

The Project site and surrounding area has the potential to provide refuge and cover from predators, perching sites, and favorable conditions for avian nesting which could be impacted by Project-related construction activities. Nesting birds are protected by the Migratory Bird Treaty Act (MBTA) and CFGC; therefore, disturbance to active bird nest is strictly prohibited. The Project's construction activities would be required by law to comply with the MBTA and CFGC regulations related to nesting birds. Mandatory compliance with these regulatory requirements would ensure that impacts are less than significant. If construction occurs between February 1st and August 31st, a pre-construction clearance survey for nesting birds should be conducted within three days of the start of any vegetation removal or ground disturbing activities. If no active nests are observed on-site, the biologist conducting the survey should document a negative survey with a brief letter indicating that no impacts to active avian nest would occur. However, if an active avian nest is observed during the pre-construction survey, construction activities would stay outside of a 300-foot buffer around the active nest; for listed raptor species, this buffer should be expanded to 500 feet. A biological monitor should be present to delineate and monitor the active nest to ensure nesting behavior is not adversely affected by construction activities. Once the young have fledged and left the nest, or the nest becomes inactive under natural conditions, construction activities within the buffer area can occur. Implementation of the aforementioned procedures would ensure that active nests and nesting behaviors are not adversely affected by Project-related construction activities; therefore, impacts to nesting birds would be less-than-significant.



Threshold b) *Have substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?*

Threshold c) *Have substantial adverse effect on State or Federal-protected wetlands as defined by Section 404 of the Clean Water Act (including but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*

1. Riparian Habitat

A single drainage feature containing riparian habitat was observed within the southwest portion of the Project site during the ELMT field surveys. This drainage feature is tributary to Little Bear Creek and Lake Arrowhead. Because this drainage feature possesses surface hydrologic connection to downstream “water of the United States”, the drainage feature falls under the regulatory authority of the Corps, RWQCB, and CDFW. The drainage feature is included in the County’s Rimforest Storm Drain Project, which is anticipated to be installed prior to the proposed Church of the Woods Project. The County would be responsible for acquiring the necessary permits to include the jurisdictional waters in their impact footprint for the storm drain project. Approximately 0.05-acre of Corps/ RWQCB jurisdiction waters and approximately 0.10-acre of CDFW jurisdiction waters would be permanently impacted by development of the Rimforest Storm Drain Project and mitigation would be the responsibility of the County. Under this scenario, implementation of the Project would have no impact on the existing on-site riparian habitat, because such habitat would have been eliminated by, and mitigated for, by the County’s Rimforest Storm Drain Project.

In the event that development of the Church of the Woods Project precedes the installation of the Rimforest Storm Drain Project, implementation of the proposed Church of the Woods Project would result in significant and direct impacts to the on-site drainage feature. The Project Applicant would be responsible for acquiring the necessary permits to impact the jurisdictional waters in the Project’s development footprint and the Church of the Woods Project Applicant would be required to implement mitigation.

2. Sensitive Natural Communities

Several special-status plant species surveys were conducted on the Project site by two consulting firms, TCL and ELMT. During the surveys conducted by ELMT in 2018, an emphasis was placed on the CNPS listed Palmer’s mariposa-lily, lemon lily, and Parish’s yampah for their low potential to occur on the Project site. No special-status plants species were observed during the ELMT plant surveys. Moreover, all remaining special-status plant species are presumed to be absent from the Project site based on habitat requirements, the availability and quality of habitat, and known distributions. Therefore, implementation of the Project would result in less-than-significant impacts to special-status plant species.

The approximately 27.12-acre Project site is located within a mixed conifer forest plant community, which is relatively common for the San Bernardino Mountains. Approximately 99% of the Project site is comprised of the mixed conifer forest plant community and the remaining 1% is comprised of riparian scrub. The Project’s proposed development would occur within the southern and central portion of the Project site, which would result in the direct removal of common plant communities and common plant species from these portions of the Project site. Moreover, the common plant community and species present on the Project site occur in large numbers throughout the region. Additionally, the Project does not entail any development on the northern and



western portions of the Project site. These portions of the Project site would remain as undisturbed open space. Therefore, the implementation of the Project would result the removal of a relatively small portion of the plant community and plant species located on-site. Accordingly, impacts to the regional plant communities and plant species in this regard would be less-than-significant.

3. Wetlands

As previously discussed, during the field study conducted by ELMT, one drainage feature, tributary to Little Bear Creek containing riparian habitat was located on the Project site. Although the Project site contains a drainage feature, no wetlands or wetland vegetation was found within or adjacent to the existing drainage system. Additionally, approximately 0.05-acre of non-wetland waters Corps/RWQCB jurisdiction and approximately 0.10-acre of streambed/riparian waters CDFW jurisdiction would be permanently impacted by the proposed Project's development. However, as previously identified under Threshold c), the Project would be responsible for the permits necessary to impact the riparian habitat in the development footprint and implement mitigation only if this area has not already been impacted by San Bernardino County's Rimforest Storm Drain Project. Because no wetlands were observed on the Project site, the Project does not have the potential to impact federally protected wetlands. Therefore, Project-related impacts to federally protected wetlands would not occur and no mitigation is required.

Threshold d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Indirect effects of the Project would include temporary increased human activity and increased ambient noise levels during construction. Temporary disruption of habitat for common wildlife species during construction would not represent a permanent or regionally significant impact. Additionally, indirect Project-related operational impacts would include increased human activity, increase ambient noise, higher artificial evening light levels, and increased threats of wildlife mortality by traffic. Although these impacts would be adverse, by themselves they are not reasonably expected to reduce common wildlife populations below self-sustaining levels in the region due to the region's abundance of suitable habitat for the common wildlife populations. Therefore, the elimination or disruption of habitat for these species that are found on the Project site would result in less-than-significant impacts to the region's wildlife population.

The Project site is located immediately east of the San Bernardino County designated Strawberry Creek wildlife corridor. The Strawberry Creek corridor provides movement opportunities from the City of San Bernardino through the San Bernardino Mountains to the Mojave River. This wildlife corridor is constrained in areas by private ownership and wildlife movement would be impeded by Project-related disturbance. However, the northern and western portions of the Project site would remain undisturbed and continue to provide movement opportunities for wildlife. Therefore, implementation of the Project would result in less-than-significant impacts to wildlife movement and wildlife corridors.



Threshold e) Conflict with any approved or adopted local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The Project site is located within the Rimforest Community and is within the jurisdiction of the Lake Arrowhead Community Planning Area²³. DREIR Section 3.G, *Land Use*, provides an extensive analysis of the proposed Project's consistency with all applicable local and regional policies, and concludes that the Project would not result in any significant conflicts with any policy, including the policies related to the protection of biological resources. In addition, the Rimforest Community does not have a tree preservation policy or ordinance. Therefore, implementation of the Project would result in no impacts to policies related to the protection of biological resources and tree preservation and no mitigation is required.

Threshold f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, state habitat conservation plan?

As described above, the Project site is located within the Lake Arrowhead Community Planning Area. This Community Planning Area is not located within an adopted HCP, Natural Community Conservation Plan, or other approved local, regional, or state HCPs. Additionally, no habitat conservation plans have been approved and none are currently in the process of approval for the lands within the San Bernardino Mountains. Therefore, development of the Project site would not conflict with an existing HCP and no mitigation is required.

3.C.9 CUMULATIVE IMPACTS

The proposed Project would result in the loss of acreage for non-sensitive plant communities and numerous common plant and animal species within the region. These natural resources are found in abundance throughout the San Bernardino National Forest and are protected within public lands of the national forest. This impact is considered adverse but not significant on either a site-specific or cumulative level because it involves non-sensitive plant communities and common plant and animal species, and the approximately 13.6 acres area of impact is small relative to the larger forest area that provides regional protection. Approximately 8.8% ($[58,472 \text{ acres}/665,753 \text{ acres}] \times 100$) of the land in the San Bernardino National Forest is identified by the Forest Service as zones of Developed Area Interface.²⁴ This zone includes areas adjacent to communities or concentrated use areas and developed sites with more scattered or isolated community infrastructure. The acreage of habitat impacted by the Project combined with related development in the area represents far less than 1% of the 8.8% of land within the forest that is potentially subject to future development. Additionally, impacts to jurisdictional waters of the State and U.S., while significant at the Project level, would be mitigated to a less than significant level through permitting requirements with the ACOE and CDFW. The same permitting requirements and mitigation would be applicable to other related projects, and the combined areas of unavoidable impact would be small in relation to the overall areas of jurisdictional waters with the National Forest, the vast majority being protected public lands. As such, with permit compliance, cumulative impacts on jurisdictional waters are considered less than significant.

²³ Lake Arrowhead Community Plan, April 12, 2007. Available at: <http://www.sbcounty.gov/Uploads/lus/CommunityPlans/LakeArrowheadCP.pdf>

²⁴ U.S. Department of Agriculture. Forest Service, Pacific Southwest Region, 2005. *Revised Land Management Plans and Final Environmental Impact Statement*.



Moreover, at the Project-level impacts to the southern rubber boa would be mitigated to a level below significance; however, at a cumulative-level impacts would be considered cumulatively significant due to the direct loss of habitat for this State-listed threatened species. In addition, impacts at the Project-level to the two State species of concern, San Bernardino flying squirrel and California spotted owl, would be mitigated to a level below significance; yet, on a cumulative-level impacts would be considered cumulatively significant due to the direct loss of habitat.

3.C.10 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION

Threshold a: Significant and Direct Impact. The Project would result in the removal of low to moderate quality habitat for the southern rubber boa, San Bernardino flying squirrel, and California spotted owl. These species are categorized as special-status. Therefore, the Project would have a substantial adverse effect on three species identified as special status by the California Department of Fish and Wildlife or U.S. Department of Fish and Wildlife and mitigation is required to reduce impacts to the aforementioned species. Impacts are considered direct and cumulatively considerable.

Threshold b and c: Potentially Significant and Direct Impact. If the proposed Project is implemented prior to the installation of the San Bernardino County Rimforest Storm Drain Project, the proposed Project would result in significant and direct impacts to 0.05 acres of jurisdictional waters under Corps and RWQCB jurisdiction and 0.10 acres under CDFW jurisdiction, and mitigation would be required. Alternatively, if the Rimforest Storm Drain Project is implemented before implementation of the proposed Project, the Storm Drain Project would have eliminated the on-site jurisdiction, and the Project would have no impact to jurisdictional waters.

Threshold d: Less-than-Significant Impact. The Project site is located immediately east of the Strawberry Creek wildlife corridor. The Project has the potential to impede wildlife movement due to Project-related disturbances; however, the northern and western portions of the Project site, which are adjacent to the Strawberry Creek corridor, would remain undisturbed and retained as on-site natural open space. These portions of the Project site would provide movement opportunities for wildlife. Therefore, the Project would result in less-than-significant impacts to wildlife movement and wildlife corridors.

Threshold e: Less-than-Significant Impact. The proposed Project would not conflict with any local policies or ordinances protecting biological resources. Impacts are considered less-than-significant.

Threshold f: Less-than-Significant Impact. The proposed Project would not conflict with an adopted local, regional, or state habitat conservation plan. Impacts are considered less-than-significant.

3.C.11 MITIGATION MEASURES

3.C.11.1 APPLICABLE COUNTY REGULATIONS AND DESIGN REQUIREMENTS

There are no applicable regulations and design requirements that are required by San Bernardino County related to biological resources.



3.C.11.2 MITIGATION MEASURES

The following mitigation measures address potentially significant adverse impacts from implementation of the proposed Project.

MM-3.C1(a) Prior to the issuance of any grading permits, the Project Applicant shall provide evidence to the Public Works Director or their designee, and the Development Services Director or their designee, that the following actions have or will be implemented.

- A pre-construction clearance survey for southern rubber boa, San Bernardino flying squirrel and California spotted owl shall be conducted at the Project site by an approved biologist no less than 30 days prior to any ground disturbing activities.
- A copy of the results of the pre-construction survey (and any additional surveys) shall be provided to the San Bernardino County Planning Department prior to the issuance of a grading permit or the granting of any authorization for any vegetation clearing and ground disturbance activities at the Project site.
 - If the results are negative, the County may issue the grading permit.
 - If southern rubber boa, San Bernardino Flying squirrel or California spotted owl are detected on-site during the preconstruction clearance survey(s), the Project Biologist shall notify the California Department of Fish and Wildlife (CDFW) immediately.
- An approved biologist shall be onsite during all vegetation clearing and rough grading. In the event that southern rubber boa, San Bernardino Flying squirrel or California spotted owl are detected on-site during vegetation clearing or rough grading activities, the approved biologist shall have authority to halt vegetation clearing and/or rough grading activities until remedial measures determined by the Project Biologist are implemented and until a suitable buffer has been established as identified by the Project Biologist. Vegetation clearing and/or rough grading activities shall only be allowed to commence within the buffer area once the approved biologist makes a determination that the species is no longer present.

MM-3.C1(b) Prior to the issuance of any grading permits, the Project Applicant shall provide evidence to the Public Works Director or their designee and the Development Services Director and their designee that the Project Applicant has provided for the permanent preservation and management in perpetuity of 13.40 acres of onsite habitat that supports a total of 1.65 available onsite acres of high-quality southern rubber boa habitat, 2.18 acres of moderate quality southern rubber boa habitat and 9.57 acres of low quality southern rubber boa habitat, 5.45 acres of moderate quality San Bernardino flying squirrel habitat and 7.95 acres of low-quality San Bernardino flying squirrel habitat; and 5.85 acres of moderate-quality California spotted owl habitat and 7.55 acres of low-quality California spotted owl habitat. The onsite habitat shall be permanently protected through the recordation of a CDFW-approved conservation easement, the selection of a CDFW-approved conservation management entity and by funding



a “non-wasting” endowment that provides for the costs associated with any initial improvements and management actions as defined in a Long-term Management Plan. The long-term management plan shall be submitted to CDFW for review and approval.

MM-3.C2(c) Prior to the issuance of any grading plan prior to the start of any on-site construction of facilities associated with the Rimforest Flood Control Project, the Project Applicant shall provide evidence to the Public Works Director or their designee and the Development Services Director or their designee that the Project Applicant has secured the following regulatory approvals: Clean Water Act (CWA) Section 404 Nationwide Permit No. 39: *Commercial and Institutional Developments*, CWA Section 401 Water Quality Certification, and California Department of Fish and Wildlife (CDFW) Section 1602 Lake or Streambed Alteration Agreement.

3.C.12 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Threshold a: Cumulatively Considerable. At the Project level, impacts to the southern rubber boa, San Bernardino flying squirrel, and California spotted owl would be mitigated to a level below significance; however, at the regional level, impacts would remain cumulatively significant and unavoidable because the Project would be directly removing suitable habitat for these special-status species.

Threshold b and c: Less-than-Significant Impact. Following the implementation of the Mitigation Measure MM-3.C2(c), impacts to jurisdictional waters would be reduced to a level below significance.



3.D GEOLOGY AND SOILS

This Subsection describes the existing geologic and soil conditions at the Project site and analyzes potential impacts associated with geologic hazards. This Subsection is largely based on information and findings contained in the *Engineering Geology and Soils Engineering Investigation* prepared for the Project by LOR Geotechnical Group, Inc. (LOR), dated November 27, 2001; supplemental correspondence between LOR and the County of San Bernardino, including a response report (letter) from LOR to the County of San Bernardino Land Use Services Department dated August 28, 2003, a letter from LOR to PCR Services Corporation dated June 16, 2005, a letter from LOR to ICON General Contractors dated November 28, 2006; and a Geotechnical Update Memo from LOR to ICON General Contractors dated March 31, 2017. The Geotechnical Update Memo prepared by LOR in March 2017 states that the conditions at the Project site are essentially unchanged since the 2001 Engineering Geology and Soils Engineering Investigation was prepared, and the Project site is considered suitable for development with the proposed Project upon licensed geotechnical engineer review of final grading and construction plans. The 2001 Engineering Geology and Soils Engineering Investigation, supplemental correspondence letters, and the Geotechnical Update Memo are included as DREIR *Technical Appendix D*.

As previously discussed in Section 2.0, *Project Description*, implementation of the Church of the Woods Project cannot precede implementation of the Rimforest Storm Drain project. Therefore, in the 0.10-acre area where development of the Rimforest Storm Drain project will physically impact the Project site as documented in the Rimforest Storm Drain Project Final EIR (SCH No. 2015051070), this DREIR bases its assessment of Project-related impacts to geology and soils to the 0.10-acre area under the future conditions that will exist upon implementation of the Rimforest Storm Drain project. As such, the Rimforest Storm Drain Project Final EIR (SCH No. 2015051070) and the Rimforest Storm Drain project related “Geological Investigation and Feasibility Evaluation of Proposed Mitigation Procedures to Reduce the Potential for Active Landsliding Immediately South of the Community of Rimforest, San Bernardino County, California” (Hilltop Geotechnical, Inc., 2010) are incorporated by reference into this DREIR, per CEQA Guidelines Section 15150. These documents are available for public review at the County of San Bernardino Land Use Services Department located at 385 N. Arrowhead Avenue, San Bernardino, CA 92415.

3.D.1 ENVIRONMENTAL SETTING

3.D.1.1 EXISTING CONDITIONS

Figure 2-5, *Aerial Photograph*, depicts existing conditions at the Project site. The Project site is located approximately 1.5 miles to the southwest of the Lake Arrowhead reservoir, along the rim of the San Bernardino Mountains overlooking the San Bernardino Valley to the south. The topography of the Project site is varied, and includes a northeasterly trending valley/drainage course that runs through the southwest part of the site and sheet flows northeasterly toward the Lake Arrowhead reservoir. The southeast area of the Project site rises upward to a small ridgeline. The western portion of the Project site slopes downward in a southeasterly direction towards the on-site drainage course. A steep ridge occurs along the face of the San Bernardino Mountains off-site to the south of the Project site beyond SR 18. Farther north of the Project site, the topography slopes gently downward in an easterly direction towards Daley Canyon Road. Figure 2-6, *USGS Topographic Map*, depicts the topographic conditions at and in the vicinity of the Project site.



Under existing conditions, the Project site is undeveloped, and primarily covered by forested areas of pine, fir and oak trees, under which is a thick layer of pine needles and organic debris. There is also a concentration of woody shrubs and tall grasses in the southwest corner of the Project site. A 10-foot sewer main easement is located on the southwest portion of the Project site and an 8-inch sewer line traverses the Project site in a parallel fashion to an on-site drainage course located in the southwest portion of the Project site within the area that would be improved by the Rimforest Storm Drain project preceding implementation of the proposed Church of the Woods Project. The existing on-site sewer line is maintained by the Lake Arrowhead Community Service District (LACSD). A narrow dirt road runs along the on-site sewer easement. Future implementation of the Rimforest Storm Drain project by the County of San Bernardino will disturb 0.10 acres in the southwest portion of the Project site in the general location of the existing on-site drainage course, sewer line easement and sewer line. The Rimforest Storm Drain project will eliminate the on-site drainage course and result in the installation of a subsurface storm drain pipe culvert to convey storm water through the Project site in a northeasterly direction. Because construction of the proposed Church of the Woods Project is dependent on the Storm Drain project being in place, the evaluation herein appropriately assumes that the Rimforest Storm Drain project will be installed and will have altered the existing condition on 0.10 acres of the Project site before the proposed Project is implemented.

3.D.1.2 GEOLOGIC CONDITIONS

A. Regional Geologic Setting

The San Bernardino Mountains are situated in the geomorphic province in southern California known as the Transverse Ranges. The Transverse Ranges consist of a set of east-west trending mountains and geologic structures that extend from the Little San Bernardino Mountains near Joshua Tree to the east of the Project site to the Channel Islands to the west. Situated in the mid-eastern portion of the ranges, the San Bernardino Mountains are approximately 55 miles long and 20 miles wide.

Geologically, the San Bernardino Mountains contain a highly-varied distribution of materials ranging from igneous intrusive rocks to older metamorphic gneiss. Previous mapping by the United States Geologic Survey (USGS) indicates that a substantial portion of the mountains are underlain by crystalline granitic rock comprised of Quartz Monzonite. Through tectonic compression activity along the San Andreas and North Frontal fault zone, these rocks were forced upwards, forming the San Bernardino Mountains. From a geologic perspective, these mountains are very young, having been formed during the last one to two million years.

Uplifting along the south flank of the San Bernardino Mountains has resulted in intense fracturing of the rocks in this region, which tends to lower the stability of these units while the rapid uplift over-steepens the slopes. This combination of fracturing and steep slopes leads to numerous landslides along the southern flanks of the San Bernardino Mountains. (LOR, 2001, p. 7)

B. Project Site Geology and Soils

The Project site is underlain by granitic bedrock overlain by a thick layer of colluvial and topsoil materials. Colluvium is thickest within the area of the on-site drainage course located on the southwest part of the Project site, whereas bedrock is overlain by older alluvium in the area of the on-site drainage course. Colluvial soils are poorly consolidated and formed as a result of the weathering of underlying basement rock and are



commonly observed on slopes within the Project vicinity. Previous geological studies performed in the Project vicinity indicate that deeper colluvial soils could have been formed as part of an ancient large landslide. The on-site areas comprised of colluvium may be subject to subsidence, liquefaction, and collapse. Alluvial soils are a form of active wash deposits that are deposited via drainage from nearby hills. The alluvial wash deposits are generally composed of very young, unconsolidated, gray, coarse-grained clastic sediments containing granitic rock fragments, feldspars, quartz, and micas. The alluvial soils at the Project site may be subject to liquefaction and collapse. A small landslide was identified on the southeastern corner of the Project site during the Geotechnical Investigation conducted at the site by LOR. Bedrock occurs throughout the Project site, and is exposed at relatively shallow depths but typically is covered by several feet of colluvium. These bedrock units are substantially weathered and subject to downslope movement by precipitation and gravity. During the field investigations performed at the Project site by LOR, trenches were excavated that revealed bedrock material overlain by up to 15 feet of relatively loose fills, colluvium, and older alluvial soils. One of the trenches on the south-central portion of the Project site revealed bedrock overlain with 7 to 14 feet of dense silty sand. (LOR, 2001, p. 8; Hilltop Geotechnical, Inc., 2010, pp. 24-26)

C. Groundwater

Groundwater was not encountered during the Geotechnical Investigation conducted at the Project site by LOR. The hard, non-porous nature of the underlying bedrock at the Project site tends to minimize groundwater seepage, with the exception of minor quantities of groundwater that may be perched over bedrock or found within fractures in the bedrock. An abandoned and capped groundwater well owned by the Big Bear Municipal Water District (BBMWD) is present on the southwest portion of the Project site; the well does not produce any groundwater under existing conditions. (LOR, 2001, pp. 8-9)

D. Seismicity and Faulting

The San Andreas fault complex runs along the southern base of the San Bernardino Mountains. The San Andreas fault is the largest fault in the southern California region and is capable of generating a large magnitude event of greater than 7.5. In addition, the San Andreas fault is the major tectonic feature running the length of the State of California, separating the Pacific Plate and the North American Plate. The San Andreas fault lies approximately 5.0 miles to the southwest of the Project site, with a northern branch of the fault complex present approximately 4.0 miles to the southwest of the Project site. The North Frontal fault zone is located approximately 6.2 miles to the northwest of the San Bernardino Mountains, and consists of numerous fault segments. The North Frontal fault is capable of producing a 7.1 or greater magnitude earthquake. (LOR, 2001, pp. 10-11)

The Engineering Geology and Soils Engineering Investigation conducted for the Project indicates that there are no known active faults traversing the Project site, nor indications of faulting or fault-related features observed at the site during field investigations. Furthermore, the Project site is not located within a State of California designated Alquist-Priolo Earthquake Fault Zone. The nearest mapped fault to the site is an unnamed fault that is located approximately 0.6 miles to the south of the Project site, and is referred to as the “Rimforest Fault” in the Geotechnical Investigation prepared for the Rimforest Storm Drain project Final EIR (SCH No. 2015051070) (LOR, 2001, pp. 10-11; Hilltop Geotechnical, Inc., 2010, p. iv). Because no faults exist on the Project site, the site is not subjected to fault rupture potential, which is defined as surface displacement that occurs when fault movement breaks through to the ground surface.



3.D.1.3 SECONDARY SEISMIC HAZARDS

A. Ground-shaking

As is common to virtually all of Southern California, strong ground-shaking can be expected at the Project site during moderate to severe earthquakes in this general region. Intensity of ground-shaking at a given location depends primarily upon earthquake magnitude, site distance from the source, and site response (soil type) characteristics.

B. Liquefaction

Liquefaction occurs when loose, cohesionless, water-saturated soils (generally fine-grained sand and silt) are subjected to strong seismic ground motion of significant duration. These soils essentially behave similar to liquids, losing bearing strength. Structures built on these soils may tilt or settle when the soils liquefy. Liquefaction occurs more often in earthquake-prone areas underlain by sandy alluvium where the groundwater table is shallower than 50 feet below ground surface (bgs). Based on the geologic characteristics of the site (primarily bedrock covered by a thick layer of colluvial, topsoil and older alluvium), the potential for liquefaction to occur at the Project site is minimal. However, there is a minor potential for liquefaction to exist in the drainage course located on the southwest portion of the Project site. (LOR, 2001, p. 12)

C. Settlement

Seismically-induced settlement generally occurs within areas of loose, unsaturated, granular soils with relatively low density during intense ground shaking. Because the majority of the Project site is underlain by granitic bedrock at very shallow depths, the potential for secondary seismic settlement along these areas is considered non-existent. There may be a potential for seismically-induced settlement within the loose fills and thick colluvial materials on-site. (LOR, 2001, p. 13)

D. Seismic Slope Instability (Landslides)

As previously stated, the San Bernardino Mountains are the result of tectonic uplifting which has fractured the rock material and steepened the slopes. These factors combine to make shallow and deep-seated landslides a common phenomenon in the area. According to the Engineering Geology and Soils Engineering Investigation prepared for the Project site, the majority of the Project site is identified as being “generally susceptible” to landslides, with the southern portion of the Project site considered “most susceptible” to landslides. Additionally, the southern area of the site is considered a “hatched 4” area, indicating an area at the edge of most susceptible slopes that is highly susceptible to damaging headward erosion, slope retreat due to raveling, rock falls, soil creep, landslides and other forms of failure. The Engineering Geology and Soils Engineering Investigation prepared for the Project site indicates it is possible that the majority of the Rimforest community, including the Project site, are underlain by a large ancient landslide. (LOR, 2001, pp. 9-10)



3.D.2 REGULATORY FRAMEWORK

3.D.2.1 STATE

A. Alquist-Priolo Earthquake Fault Zoning Act (A-P Act)

The Alquist-Priolo Earthquake Fault Zoning Act (A-P Act) was passed in 1972 to mitigate the hazard of surface faulting to structures for human occupancy. The A-P Act's main purpose is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The A-P Act only addresses the hazard of surface fault rupture and is not directed toward other earthquake hazards. (CGS, n.d.)

The A-P Act requires the State Geologist to establish regulatory zones (known as Earthquake Fault Zones) around the surface traces of active faults and to issue appropriate maps. ["Earthquake Fault Zones" were called "Special Studies Zones" prior to January 1, 1994.] The maps are distributed to all affected cities, counties, and state agencies for their use in planning and controlling new or renewed construction. Local agencies must regulate most development projects within the zones. Projects include all land divisions and most structures for human occupancy. Single family wood-frame and steel-frame dwellings up to two stories not part of a development of four units or more are exempt. However, local agencies can be more restrictive than state law requires. (CGS, n.d.)

Before a project can be permitted, cities and counties must require a geologic investigation to demonstrate that proposed buildings will not be constructed across active faults. An evaluation and written report of a specific site must be prepared by a licensed geologist. If an active fault is found, a structure for human occupancy cannot be placed over the trace of the fault and must be set back from the fault (generally 50 feet). (CGS, n.d.)

B. Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act (SHMA) of 1990 (Public Resources Code, Chapter 7.8, § 2690-2699.6) directs the Department of Conservation, California Geological Survey to identify and map areas prone to liquefaction, earthquake-induced landslides, and amplified ground shaking. The purpose of the SHMA is to minimize loss of life and property through the identification, evaluation, and mitigation of seismic hazards. (CGS, n.d.)

Staff geologists in the Seismic Hazard Zonation Program gather existing geological, geophysical, and geotechnical data from numerous sources to produce the Seismic Hazard Zone Maps. They integrate and interpret these data regionally in order to evaluate the severity of the seismic hazards and designate as Zones of Required Investigation (ZORI) those areas prone to liquefaction and earthquake-induced landslides. Cities and counties are then required to use the Seismic Hazard Zone Maps in their land use planning and building permit processes. (CGS, n.d.)

The SHMA requires site-specific geotechnical investigations be conducted within the Zones of Required Investigation to identify and evaluate seismic hazards and formulate mitigation measures prior to permitting most developments designed for human occupancy. (CGS, n.d.)



C. Natural Hazards Disclosure Act

The Natural Hazards Disclosure Act, effective June 1, 1998 (as amended June 9, 1998), requires that sellers of real property and their agents provide prospective buyers with a "Natural Hazard Disclosure Statement" when the property being sold lies within one or more state-mapped hazard areas, including a Seismic Hazard Zone. (CGS, n.d.)

The law requires the State Geologist to establish regulatory zones (Zones of Required Investigation) and to issue appropriate maps (Seismic Hazard Zone maps). These maps are distributed to all affected cities, counties, and state agencies for their use in planning and controlling construction and development. Single-family frame dwellings up to two stories not part of a development of four or more units are exempt from the state requirements. However, local agencies can be more restrictive than state law requires. (CGS, n.d.)

Before a development permit can be issued or a subdivision approved, cities and counties must require a site-specific investigation to determine whether a significant hazard exists at the site and, if so, recommend measures to reduce the risk to an acceptable level. The investigation must be performed by state-licensed engineering geologists and/or civil engineers. (CGS, n.d.)

D. Building Earthquake Safety Act

In 1986, the California Legislature determined that buildings providing essential services should be capable of providing those services to the public after a disaster. Their intent in this regard was defined in legislation known as the Essential Services Buildings Seismic Safety Act of 1986 and includes requirements that such buildings shall be "...designed and constructed to minimize fire hazards and to resist...the forces generated by earthquakes, gravity, and winds." This enabling legislation can be found in the California Health and Safety Code, Chapter 2, § 16000 through 16022. In addition, the California Building Code defines how the intent of the act is to be implemented in Title 24, Part 1 of the California Building Standards Administrative Code, Chapter 4, Articles 1 through 3. (CAB, n.d.)

E. California Green Building Standards Code (Title 24)

California Code of Regulations (CCR) Title 24 is reserved for state regulations that govern the design and construction of buildings, associated facilities, and equipment. These regulations are also known as building standards (reference California Health and Safety Code § 18909). Health and Safety Code (state law) Section 18902 gives CCR Title 24 the name California Building Standards Code (CBSC). (CBSC, 2010, p. 6)

The CBSC in CCR Title 24 is published by the California Building Standards Commission and it applies to all building occupancies (see Health and Safety Code §§ 18908 and 18938) throughout the State of California. Cities and counties are required by state law to enforce CCR Title 24 (reference Health and Safety Code §§ 17958, 17960, 18938(b), and 18948). Cities and counties may adopt ordinances making more restrictive requirements than provided by CCR Title 24, because of local climatic, geological, or topographical conditions. Such adoptions and a finding of need statement must be filed with the California Building Standards Commission (Reference Health and Safety Code § 17958.7 and 18941.5). (CBSC, 2010, pp. 6-7)



F. Porter-Cologne Water Control Act

The Porter-Cologne Act is the principal law governing water quality regulation in California. It establishes a comprehensive program to protect water quality and the beneficial uses of water. The Porter-Cologne Act applies to surface waters, wetlands, and ground water and to both point and nonpoint sources of pollution. Pursuant to the Porter-Cologne Act (California Water Code § 13000 *et seq.*), the policy of the State is as follows:

- That the quality of all the waters of the State shall be protected;
- That all activities and factors affecting the quality of water shall be regulated to attain the highest water quality within reason; and
- That the State must be prepared to exercise its full power and jurisdiction to protect the quality of water in the State from degradation. (SWRCB, 2014)

The Porter-Cologne Act established nine Regional Water Quality Control Boards (RWQCB) (based on hydrogeologic barriers) and the State Water Resources Control Board (SWRCB), which are charged with implementing its provisions and which have primary responsibility for protecting water quality in California. The SWRCB provides program guidance and oversight, allocates funds, and reviews RWQCB decisions. In addition, the SWRCB allocates rights to the use of surface water. The RWQCB have primary responsibility for individual permitting, inspection, and enforcement actions within each of nine hydrologic regions. The SWRCB and RWQCB have numerous non-point source (NPS) related responsibilities, including monitoring and assessment, planning, financial assistance, and management.

The RWQCB regulates discharges under the Porter-Cologne Act primarily through issuance of NPDES permits for point source discharges and waste discharge requirements (WDRs) for NPS discharges. Anyone discharging or proposing to discharge materials that could affect water quality (other than to a community sanitary sewer system regulated by an NPDES permit) must file a report of waste discharge. The SWRCB and the RWQCBs can make their own investigations or may require dischargers to carry out water quality investigations and report on water quality issues. The Porter-Cologne Act provides several options for enforcing WDRs and other orders, including cease and desist orders, cleanup and abatement orders, administrative civil liability orders, civil court actions, and criminal prosecutions. (SWRCB, 2014)

The Porter-Cologne Act also implements many provisions of the Clean Water Act, such as the NPDES permitting program. The Porter-Cologne Act also requires adoption of water quality control plans that contain the guiding policies of water pollution management in California. In addition, regional water quality control plans (basin plans) have been adopted by each of the RWQCBs and get updated as necessary and practical. These plans identify the existing and potential beneficial uses of waters of the State and establish water quality objectives to protect these uses. The basin plans also contain implementation, surveillance, and monitoring plans. (SWRCB, 2014) Although the Project site is located on the boundary of the Lahontan and Santa Ana River Basin Plan, the Project site is within the purview of the Santa Ana RWQCB. The Santa Ana RWQCB Basin Plan is the governing water quality plan for the region.



3.D.2.2 REGIONAL

A. San Bernardino Development County Code

San Bernardino County Building Regulations (Title 6, Division 3) set forth required provisions for implementation of the CALGreen (Chapter 1, Sections 63.0101 to 63.0104), and compliance with the general provisions for CALGreen (Chapter 8, Sections 63.0801 to 63.0810). Additionally, Chapter 83.08 of the San Bernardino County Development Code (Title 8 of the San Bernardino County Code) sets forth regulations for hillside grading standards. In addition, Chapter 88.02 of the San Bernardino County Development Code establishes requirements for dust control and reduction of soil erosion.

As shown on County Geologic Hazard Overlay Map FH23 C, the southern portion of the Project site is located within an area of “moderate to high” landslide susceptibility (San Bernardino County, 2010a). Because the Project is located in an area that is susceptible to landslide activity, the Project would be subject to the provisions of Chapter 82.15, Geologic Hazard (GH) Overlay of the County Development Code. Section 82.15.0303 of the County Development Code requires the preparation of a detailed geologic study for development proposed within the GH Overlay that addresses the following:

- Areas of faulting;
- Areas of slope stability;
- Areas of liquefaction susceptibility;
- Areas of potential seiche; and
- Areas of adverse soil conditions.

The Project site is also located within the Fire Safety (FS) Overlay, Fire Safety Area 1, which includes land within the San Bernardino National Forest and is characterized by moderate to steep terrain (San Bernardino County, 2010b). Development within the FS Overlay would be subject to additional standards specified in Chapter 82.13 of the County Development Code. Specific requirements of Chapter 82.13 include the preparation of a slope analysis, a preliminary grading plan, a fuel modification plan, and a Soil Erosion and Sediment Control Plan to control the potential for accelerated erosion due to development activity. The components of the Soil Erosion and Sediment Control Plan are described in further detail in DREIR Subsection 3.F, *Hydrology, Water Quality, and Water Supply*. These components of the County Development Code would apply to the Project for the purposes of eliminating and preventing conditions of accelerated erosion that could result in degradation of water quality, damage to property, loss of topsoil and vegetation cover, and increased danger from flooding and the deposition of sediments and associated nutrients.

3.D.3 THRESHOLDS OF SIGNIFICANCE

The following significance criteria for geology and soils are based on Appendix G of the State CEQA Guidelines and adjusted for relevance to this analysis based on local conditions and the project description. Using these thresholds, the proposed Project would have a significant impact related to geology and soils if it would result in any of the following:



- a. *Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:*
 - 1) *Rupture of a known earthquake fault as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (refer to Division of Mines and Geology Special Publication 42);*
 - 2) *Strong seismic ground shaking;*
 - 3) *Seismic-related ground failure, including liquefaction; and/or*
 - 4) *Landslides.*
- b. *Result in substantial soil erosion or the loss of topsoil.*
- c. *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.*
- d. *Be located on expansive soil, creating substantial risks to life or property.*

No impact analysis was conducted pursuant to the following threshold question from Appendix G of the State CEQA Guidelines due to the lack of its applicability to the Project:

- e. *Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water.*

The Project would connect to the municipal sewer system and does not entail the installation of septic tanks or alternative waste water disposal systems. Therefore, the Project would result in no impact with respect to Threshold e.

3.D.4 ENVIRONMENTAL IMPACTS

3.D.4.1 METHODOLOGY

This impact analysis is based on the Engineering Geology and Soils Engineering Investigation prepared for the Project site by LOR dated November 27, 2001 and the Geotechnical Update Memorandum dated March 31, 2017 (refer to DREIR *Technical Appendix D*). These documents address the following issues:

- Review of geologic and geotechnical literature, reports, maps and agency information;
- Interpretation of stereo photography pairs taken of the site and surrounding regions at various dates ranging from 1953 through 2001;
- Geologic field reconnaissance mapping to verify the aerial distribution of earth units and significance of surficial features as compiled from documents, literature and reports reviewed;
- A geophysical survey using non-destruction seismic methods;
- A subsurface field investigation including excavation, sampling, and logging of eight backhoe trenches;
- Laboratory testing of selected soil samples obtained during the field investigation;



- Development of geotechnical recommendations for site plan design, and for site mass grading, utilities construction, and preliminary foundation and pavement designs;
- A site visit conducted by LOR staff on March 28, 2017 which confirmed that site conditions had not changed since the original Geology and Soils Engineering Investigation was conducted in November 2001.

As previously discussed above in Subsection 3.D, implementation of the Rimforest Storm Drain project will precede the proposed Church of the Woods Project and will physically impact 0.10 acres of the Project site, as documented in the Rimforest Storm Drain Project Final EIR (SCH No. 2015051070). This DREIR bases its assessment of Project-related impacts to geology and soils to those 0.10 acres on the future condition that will exist upon implementation of the Rimforest Storm Drain project. As such, the Rimforest Storm Drain Project Final EIR (SCH No. 2015051070) and the related “Geological Investigation and Feasibility Evaluation of Proposed Mitigation Procedures to Reduce the Potential for Active Landsliding Immediately South of the Community of Rimforest, San Bernardino County, California” (Hilltop Geotechnical, Inc., 2010) are incorporated by reference into this DREIR.

The analysis and findings in investigational materials included as DREIR *Technical Appendix D*, as well as applicable information from the Rimforest Storm Drain EIR cited herein, serve as the basis for identifying the potential for the Project to result in significant impacts to the environment related to geology and soils.

3.D.5 IMPACT ANALYSIS

Threshold a) *Would the Project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:*

- 1) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.*
- 2) Strong seismic ground shaking?*
- 3) Seismic-related ground failure, including liquefaction?*
- 4) Landslides?*

1. Rupture of a Known Earthquake Fault

The Project site is not located within any Alquist-Priolo Earthquake Fault Zones and no known faults underlie the site. The nearest fault to the Project site is the Rimforest Fault, located approximately 0.6 mile to the south of the Project site. Because the Project site is not located within an Alquist-Priolo Earthquake Fault Zone and because no known active faults underlie the Project site, the Project site would not be exposed to fault rupture during a seismic event and no impact would occur.



2. *Strong Seismic Ground Shaking*

As with all of southern California, the Project site would be exposed to strong seismic ground shaking as a result of earthquakes in the region. The buildings and infrastructure proposed on the Project site would be subject to ground shaking during seismic events along local and regional faults that would occur during the lifetime operation of the proposed Project. Therefore, the Project has the potential to expose people or structures to adverse effects associated with seismic events. The Rimforest Fault is located approximately 0.6 mile to the south of the Project site. Additionally, a branch of the San Andreas Fault Zone is located approximately 4.0 miles to the southwest of the Project site, and is known to be potentially capable of producing earthquakes up to magnitude 7.5. The hazard posed by seismic shaking in the Project vicinity is considered high, due to the proximity of known active faults. The Project site's Engineering Geology and Soils Engineering Investigation (DREIR *Technical Appendix D*) identifies general recommendations to attenuate seismic hazards at the site. Additionally, CALGreen, San Bernardino County Code (Title 6, Division 3, *Building Regulations*), and the San Bernardino County Development Code (Title 8 of the San Bernardino County Code) impose building requirements applicable to the Project to ensure seismic hazards at the Project site would be attenuated through structural design standards. Compliance with the applicable requirements of CALGreen and the San Bernardino County Code would be assured through the County's review of grading and building permits which would ensure that strong seismic ground shaking effects are attenuated. Accordingly, the Project would have a less-than-significant impact associated with seismically-induced ground shaking and mitigation is not required.

3. *Seismic-Related Ground Failure, Including Liquefaction*

The potential for liquefaction generally occurs during strong ground shaking within fine grained loose sediments where the groundwater is usually less than 50 feet. Based on the geologic conditions of the site (i.e., shallow granitic bedrock and the absence of shallow groundwater), the potential for liquefaction on the majority of the Project site is non-existent, although the northeasterly areas of the on-site drainage course that traverses the southwest portion of the Project site may have some liquefaction potential (LOR, 2001, p. 12). However, the Project is required to comply with current State and local building and safety codes (including CALGreen building requirements and the County of San Bernardino Development Code [Title 8 of the San Bernardino County Code]). Compliance with the applicable State and local building and safety codes would ensure that the Project would not expose people to substantial risk of injury from liquefaction hazards, and impacts related to liquefaction would be less than significant.

4. *Landslides*

According to the Engineering Geology and Soils Engineering Investigation prepared for the Project site (DREIR *Technical Appendix D*), the majority of the Project site is identified as being "generally susceptible" to landslides, with the southern portion of the Project site considered "most susceptible" to landslides. Additionally, the southern area of the site is considered a "hatched 4" area, indicating an area at the edge of most susceptible slopes that is highly susceptible to damaging headward erosion, slope retreat due to raveling, rock falls, soil creep, landslides and other forms of failure. The Engineering Geology and Soils Engineering Investigation prepared for the Project site indicates the Project site and the Rimforest area predominately west of the site may be underlain by a large, deep-seated ancient landslide complex. However, the Engineering Geology and Soils Engineering Investigation states that no strong evidence was found for the landslide area to



include the Project site, and that if the postulated landslide were present, the Project site is considered to be grossly stable. The Project's Engineering Geology and Soils Engineering Investigation also identified a small potential landslide area on the southeast portion of the Project site immediately upslope of Highway 18. Additionally, County Geologic Hazard Overlay Map FH23 C depicts the southern portion of the Project site as being located within an area of "moderate to high" landslide susceptibility (San Bernardino County, 2010a). Development of the Project site with the proposed Project would further disturb the subsurface environment at the Project site, and could potentially exacerbate existing seismic landslide risks at the site. According to the *Church of the Woods Earthwork Analysis Report* (DREIR Technical Appendix D2) preliminary grading quantities are calculated to be 195,297 cubic yards of cut materials and 119,313 cubic yards of fill material (W.J. McKeever Inc., Appendix F). The excavated materials would be placed in the southwestern and northwestern portions of the Project site for construction of the sports field, Project site entry, and parking areas. Additionally, the Earthwork Analysis Report (DREIR Technical Appendix D2) calculated that approximately 42,368 cubic yards of material contained on the Project site comprised of highly organic topsoil is not considered suitable for reuse as engineered fill would be transported a transfer station and subsequently transferred to the Mid-Valley Landfill for disposal. Following the removal of unsuitable materials, remedial grading shrinkage, and mass excavation shrinkage, the Project site would be balanced by adjusting the grades in the area of the area of the proposed sports field, entry road, and the western parking lots. Although the Project site would be balanced following Project-related grading activities, the Project site is still located within an area with a "moderate to high" landslide susceptibility and could potentially expose on-site and off-site persons and/or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides, and impacts associated with landslide hazards would be significant and would require mitigation.

Threshold b) Would the Project result in substantial soil erosion or the loss of topsoil?

1. Temporary Construction-Related Activities

Grading activities associated with the proposed Project would temporarily expose underlying soils in the Project's grading footprint to water and air, which would increase erosion susceptibility while the soils are exposed. Exposed soils on the Project site would be subject to erosion during rainfall events or high winds due to temporary exposure of these erodible materials to wind and water. Erosion by water would be greatest during the rainy season after grading before structures are erected and paving and landscaping occur. Erosion by wind would be highest during periods of high wind speeds when soils are exposed.

Pursuant to the requirements of the SWRCB, the Project Applicant would be required to obtain coverage under a NPDES permit for construction activities. The NPDES permit is required for all projects that include construction activities, such as clearing, grading, and/or excavation that disturb at least one acre of total land area. Additionally, during grading and other construction activities involving soil exposure or the transport of earth materials, the Project would be subject to the requirements established in Chapter 88.02 of the San Bernardino County Development Code, which establishes requirements for the control of dust and erosion during grading. As part of the mandatory County Development Code and NPDES requirements, the Project Applicant would be required to prepare a Stormwater Pollution Prevention Plan (SWPPP) that would address construction fencing, sand bags, and other erosion-control features (including wind erosion) that would be implemented during the construction phase to reduce the site's potential for soil erosion or the loss of topsoil.



In addition, construction activities associated with the Project would be required to comply with SCAQMD Rule 403-Fugitive Dust, which would minimize wind-related erosion hazards during construction activities. Mandatory compliance to the Project's NPDES permit and these regulatory requirements of the SCAQMD and San Bernardino County would ensure that water and wind erosion is minimized and not substantial; impacts would be less than significant.

2. *Impact Analysis for Long-Term Operational Activities*

Following construction, wind and water erosion on the Project site would be minimized, as the areas disturbed during construction would be landscaped or covered with impervious surfaces. Only nominal areas of exposed soil, if any, would occur in the Project's landscaped areas. The only potential for erosion effects to occur during Project operation would be indirect effects from storm water discharged from the property. The Project proposes to construct a network of drainage lines and water quality catch basins throughout the site to accommodate storm water runoff flows. A 7,838-sq. ft. bioretention basin would be developed on the south-central portion of the Project site that would receive storm water flows from the northern and eastern areas of the Project site. The bioretention basin would slow and treat on-site storm water runoff before it is discharged to the San Bernardino County Flood Control District (SBCFCD) storm drain system. As shown on Figure 2-7, *Proposed Site Plan*, the Project would provide for a 40-foot-wide storm drain easement for SBCFCD that would traverse the southwest portion of the Project site in a northeasterly to southwesterly orientation. The 40-foot SBCFCD easement would accommodate the on-site subsurface flood control improvements to be constructed as part of SBCFCD's Rimforest Storm Drain project, which would convey off-site storm water flows from the north through the Project site and ultimately connect to a future improved SBCFCD storm drain in SR-18. Additionally, the proposed on-site landscaped areas and the 54,000-sq. ft. sports field on the southwest portion of the Project site would be designed to allow these facilities to capture storm water as a part of the Project's storm water runoff mitigation plan. All development within the unincorporated portions of the County, including the Project, is subject to the provisions of the San Bernardino County NPDES MS4 Permit. Additionally, the Project would install design features as specified in the Project's Preliminary Water Quality Management Plan (WQMP) which is included in DREIR *Technical Appendix F*. The implementation of the drainage plan described above, and the design features discussed in the WQMP would ensure the Project does not result in significant siltation or erosional effects associated with water discharge.

In addition, the Project Applicant is required to prepare and submit to the County for approval a Project-specific SWPPP and Final WQMP prior to the issuance of building permits. The SWPPP and Final WQMP together are required to identify and implement an effective combination of erosion control and sediment control measures (i.e., BMPs) to reduce or eliminate discharge to surface water from storm water and non-storm water discharges. Adherence to the requirements noted in the Project's required WQMP (refer to DREIR *Technical Appendix F*) and site-specific SWPPP would further ensure that potential erosion and sedimentation effects would be less than significant.



Threshold c) *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.*

1. Landslides

As discussed above in Threshold a, the Project site is located in an area susceptible to landslides. The Project would be designed and constructed in a manner that incorporates the recommendations of a Project-specific geotechnical investigation (refer to Mitigation Measure MM 3.D-1) and would not create conditions at the site that would result in the occurrence of an on-site or off-site landslide. With implementation of the recommendations of a Project-specific geotechnical investigation (required through compliance with Title 8 of the San Bernardino County Code and Mitigation Measure MM 3.D-1), and mandatory compliance with the hillside grading standards established in Chapter 83.08 of the San Bernardino County Development Code, the potential for landslides to occur at the Project site during construction and operation of the Project would be reduced to less than significant.

2. Lateral Spreading

Lateral spreading occurs when large quantities of intact, non-liquefied soil move downslope on a liquefied substrate of relatively large aerial extent. The mass moves toward an unconfined area, such as a descending slope or stream-cut bluff, and is known to move on slope gradients as gentle as 1 degree. The sloped areas of the Project site (i.e., on-site valley area on the southwest portion of the site) may potentially be susceptible to lateral spreading. As discussed in Section 2.0, *Project Description*, the Rimforest Storm Drain project would be implemented prior to commencement of the proposed Project, and would have a direct physical impact on approximately 0.10 acres of the Project site. With implementation of the Rimforest Storm Drain project, a substantial portion of the on-site valley areas located on the southwest portion of the Project site that have been identified as being susceptible to lateral spreading would be removed and/or recompacted in accordance with the applicable regulatory standards. It is unknown whether implementation of the Rimforest Storm Drain project would remove the entirety of soils at the Project site that are susceptible to lateral spreading; therefore, soils prone to lateral spreading could reasonably still be present at the Project site following implementation of the Rimforest Storm Drain project. Therefore, impacts associated with lateral spreading would be significant.

3. Subsidence

Subsidence is a gradual settling or sudden sinking of the ground surface. The principal causes of subsidence are aquifer-system compaction, drainage of organic soils, underground mining, and natural compaction. Physical disturbances would be necessary to implement the proposed Project. The Project would disturb approximately 16.9 acres as a result of grading. According to the Earthwork Analysis Report (DREIR *Technical Appendix D2*), preliminary grading quantities are calculated to be 195,297 cubic yards of cut materials and 119,313 cubic yards of fill materials. The excavated materials would be placed in the southwestern and northwestern portions of the Project site for the construction of the sports field, entry, and parking areas. Additionally, the Earthwork Analysis Report calculated that there is approximately 42,368 cubic yards of material containing highly organic topsoil that would not be suitable for reuse as engineering fill on site. The unsuitable material would be transported to a transfer station and subsequently transported to



the Mid-Valley Landfill for disposal. Following the removal of unstable material, remedial grading shrinkage, and mass excavation shrinkage, the Project site would be balanced by adjusting the grades in the area of the proposed sports field, entry road, and the western parking lots. Moreover, because the majority of the site is underlain by granitic bedrock at very shallow depths, the potential for subsidence along these areas is considered non-existent; however, there may be some potential for seismically induced settlement within the loose fills and thick colluvial materials within the on-site valley area on the southwest portion of the Project site. However, the Project would be subject to the requirements established by the State and local building and safety codes (i.e. CALGreen and the County Development Code, respectively) related to the mitigation of earthquake-related hazards, including subsidence. Therefore, the Project would not expose people to substantial risk of injury from subsidence hazards, and impacts related to subsidence would be less than significant.

4. Liquefaction

Liquefaction occurs when loose, cohesionless, water-saturated soils (generally fine-grained sand and silt) are subjected to strong seismic ground motion of significant duration. These soils essentially behave similar to liquids, losing bearing strength. Structures built on these soils may tilt or settle when the soils liquefy. Liquefaction occurs more often in earthquake-prone areas underlain by sandy alluvium where the groundwater table is shallower than 50 feet bgs. Based on the geologic characteristics of the Project site (primarily bedrock covered by a thick layer of colluvial, topsoil and older alluvium), the potential for liquefaction to occur at the Project site is minimal. Additionally, the County Geologic Hazard Overlays Map (FH23 C) does not depict the Project site as being located within an area susceptible to liquefaction (San Bernardino County, 2010a). Nevertheless, there is potential for liquefaction to exist near the on-site valley areas located on the southwest portion of the Project site. As discussed in above, the Rimforest Storm Drain project would be implemented prior to commencement of the proposed Project, and would have a direct physical impact on approximately 0.10 acres of the Project site. With implementation of the Rimforest Storm Drain project, a substantial portion of the on-site valley areas located on the southwest portion of the Project site that contains soils susceptible to liquefaction would be removed and/or recompacted in accordance with the applicable regulatory standards. It is unknown whether implementation of the Rimforest Storm Drain project would remove the entirety of on-site soils that are susceptible to liquefaction; therefore, soils prone to liquefaction could reasonably still be present at the Project site following implementation of the Rimforest Storm Drain project. Accordingly, potential impacts associated with liquefaction would be significant, and mitigation would be required.

5. Collapse

Collapse potential refers to potential settlement of the alluvial soil under existing stresses (loads) upon being subjected to moisture. The Project-specific Engineering Geology and Soils Engineering Investigation (DREIR *Technical Appendix D*) observed soil types at the Project site to be characterized by granitic bedrock overlain by a thick layer of up to 15 feet of relatively loose fills, colluvium, and older alluvial soils. Based on the presence of older alluvial soils overlying the granitic bedrock at the Project site, there is the potential for the on-site soils to be susceptible to collapse if left in place and exposed to loads (weight) such as would occur if a building were to be placed on top of these soils in their existing condition. Implementation of the Project would result in 195,297 cubic yards of excavation and 119,313 cubic yards of fill material. Additionally, the Earthwork Analysis Report (DREIR *Technical Appendix D2*) calculated approximately 42,368 cubic yards of materials containing highly organic top soil that are unsuitable material for reuse as engineering fill on site.



The unsuitable materials would be transported to a transfer station and subsequently transferred to the Mid-Valley Landfill for disposal. Following the removal of unsuitable materials, remedial grading shrinkage, and mass excavation shrinkage, the Project site would be balanced by adjusting the grades in the area of the proposed sports field, entry load, and western parking lots. As such, impacts associated with collapsible soils would be less-than-significant.

Threshold d) Would the Project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

The Project's Engineering Geology and Soils Engineering Investigation (DREIR *Technical Appendix D*) conducted by LOR encountered granular soils in the upper materials, which are considered to have very low expansion potential. Based on the very low expansion potential of the on-site soils, impacts associated with expansive soils would be less than significant.

3.D.6 CUMULATIVE IMPACTS

With the exception of erosion hazards, potential geologic and soils effects are inherently restricted to the areas proposed for development and would not contribute to cumulative impacts associated with other existing, planned, or proposed development. That is, thresholds including fault rupture, seismic ground shaking, liquefaction, expansive soils and other geologic hazards would involve effects to (and not from) the proposed development, and are specific to on-site conditions. Accordingly, addressing these potential hazards for the proposed development would involve using measures to conform to existing requirements, and/or site-specific design and construction efforts that have no relationship to, or impact on, off-site areas. Because of the site-specific nature of these potential hazards and the measures to address them, there would be no connection to similar potential issues or cumulative effects to or from other properties.

As discussed in Section 2.0, *Project Description*, the Rimforest Storm Drain project would be implemented prior to commencement of the proposed Project, and would have a direct physical impact on approximately 0.10 acres of the Project site. Accordingly, the Rimforest Storm Drain project is regarded as a cumulative project with respect to the proposed Project. The Rimforest Storm Drain Project Final EIR (SCH No. 2015051070) evaluates the potential impacts to geology and soils that would result from implementation of the Rimforest Storm Drain project, and concluded that the storm drain project's impacts to geology and soils would be less than significant with mitigation. Additionally, the purpose of the Rimforest Storm Drain project is to address erosion and landslide problems in the area, and would therefore improve conditions related to landslides and erosion events that occur in the southwest corner of the Project site. With implementation of the Rimforest Storm Drain project, a substantial portion of the on-site valley areas located on the southwest portion of the Project site that have been identified as being susceptible to lateral spreading and liquefaction would be removed and/or recompacted in accordance with the applicable regulatory standards. Furthermore, the Rimforest Storm Drain project would be required to implement all mitigation measures from the Rimforest Storm Drain Project Final EIR (SCH No. 2015051070) intended to mitigate the storm drain project's geology and soils-related impacts, and also would be required to comply with the requirements of the storm drain project's NPDES permit, SWPPP, WQMP, Chapter 88.02 of the San Bernardino County Development Code, and SCAQMD Rule 403. Accordingly, with implementation of the required mitigation measures from the Rimforest Storm Drain Project Final EIR (SCH No. 2015051070), implementation of the Project-specific



mitigation measures identified in this DREIR (refer to Subsection 3.D.8), and mandatory compliance with the regulatory requirements discussed above, the combined impacts from the proposed Project and the Rimforest Storm Drain project would be less-than-cumulatively-considerable with respect to geology and soils.

As discussed under Threshold b, the Project's both near-term construction and long-term operation, measures, such as a bioretention basin, would be incorporated into the Project's design to ensure that significant erosion hazards do not occur. Other developments within the Project vicinity would be required to comply with similar requirements, such as the need to obtain an NPDES permit and mandatory compliance with the resulting SWPPPs and WQMPs. All projects in the Project area also would be required to demonstrate that measures have been incorporated to ensure that development does not result in substantial increases in the amount or rate of runoff, which could in turn increase soil erosion. All projects in the cumulative Project area also would be required to comply with the requirements of Chapter 88.02 of the San Bernardino County Development Code and SCAQMD Rule 403, which would preclude wind-related erosion hazards during construction. Therefore, because the Project would result in less-than-significant erosion impacts, and because other projects within the cumulative Project area would be subject to similar requirements to control erosion hazards during construction and long-term operation, cumulative impacts associated with wind and water erosion hazards are evaluated as less than significant.

3.D.7 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION

Threshold a: Potentially Significant Impact. The Project would not expose people or structures to substantial adverse effects from seismic hazards. As with all properties in the southern California region, the Project site is subject to strong seismic ground shaking associated with earthquakes; however, mandatory compliance with local and State ordinances and building codes including but not limited to CALGreen and the County of San Bernardino Development Code (Title 8 of the San Bernardino County Code) would ensure that the proposed structures are developed as required to attenuate the risk of loss, injury, or death to less-than-significant levels. According to the Engineering Geology and Soils Engineering Investigation (DREIR *Technical Appendix D*) prepared for the Project by LOR, the on-site valley areas of the Project site may be susceptible to liquefaction; therefore, the Project has the potential to expose people and/or structures to substantial adverse effects due to liquefaction and landslides. Impacts associated with landslides would be significant and require mitigation.

Threshold b: Less-than-Significant Impact. No susceptibility to erosion was identified in the Engineering Geology and Soils Engineering Investigation (DREIR *Technical Appendix D*) prepared for the Project by LOR. With mandatory compliance with the Project's NPDES permit, regulatory requirements of the SCAQMD (i.e., SCAQMD Rule 403-Fugitive Dust), the San Bernardino County Development Code, and the Project-specific SWPPP and WQMP would minimize water and wind erosion; impacts would be less than significant.

Threshold c): Potentially Significant Impact. The Project site is located in an area susceptible to landslides, therefore the potential for landslides at the Project site during construction and operation is considered significant. According to the Engineering Geology and Soils Engineering Investigation (DREIR *Technical Appendix D*) prepared for the Project, the sloped areas of the Project site (i.e., on-site valley area) may potentially be susceptible to lateral spreading. Accordingly, impacts associated with lateral spreading would be considered significant. The Engineering Geology and Soils Engineering Investigation (DREIR *Technical Appendix D*) prepared for the Project did not find conditions at the site that are susceptible to subsidence with



the exception of the on-site valley areas. However, compliance with the seismic requirements of State and local building and safety codes (i.e. CALGreen and the County Development Code, respectively) would reduce impacts associated with subsidence to levels that are less than significant. The potential for liquefaction at the Project site is considered minimal, with the exception of the on-site valley areas on the southwest portion of the Project site where there is a potential for liquefaction to occur. Accordingly, impacts associated with liquefaction would be considered potentially significant. Based on the presence of older alluvial soils overlying the granitic bedrock at the Project site, there is the potential for the on-site soils to be susceptible to collapse. Impacts associated with collapsible soils at the Project site are considered significant and require mitigation.

Threshold d): Less-than-Significant Impact. The Project's Engineering Geology and Soils Engineering Investigation (DREIR *Technical Appendix D*) conducted by LOR encountered granular soils in the upper materials, which are considered to have very low expansion potential. Based on the very low expansion potential of the on-site soils, impacts associated with expansive soils would be less than significant.

3.D.8 MITIGATION MEASURES

3.D.8.1 APPLICABLE COUNTY REGULATION AND DESIGN REQUIREMENTS

The following are applicable regulations and design requirements that will be imposed on the Project by San Bernardino County pursuant to the County's Development Code. Although these requirements technically do not meet CEQA's definition for mitigation because they are regulatory requirements, they are specified herein to document required Project compliance with applicable County regulations.

- The Project is required to comply with the standards established in Chapter 83.08, *Hillside Grading Standards*.
- The Project is required to prepare and submit a Stormwater Pollution Prevention Plan in accordance with the requirements of Section 85.11.030, *Erosion Control Plan and Inspection Required*, of the San Bernardino County Development Code.
- The Project is required to comply with the standards established in Chapter 88.02, *Soil and Water Conservation* of the San Bernardino County Development Code.

3.D.8.2 MITIGATION MEASURES

MM 3.D-1 Prior to issuance of any grading permit, the San Bernardino County Building Official or their designee shall confirm that the Grading Plan incorporates specific measures from the required design-level geotechnical investigation which shall, at a minimum, address landslides, liquefaction, lateral spreading, and collapsible soils. The geotechnical investigation report and the measures that shall be included as notes on the Grading Plan and shall comport with the provisions established in Chapter 87.08, *Soils Reports*, and Chapter 88.02, *Soil and Water Conservation*, of the San Bernardino County Code. Remedial measures to address landslides may include, but not be limited to: removal, repositioning, embedment, anchoring of boulders; installation of catchment fences; and construction in accordance with the recommendations of



the Project geotechnical engineer, CALGreen and any County guidelines. Potential remedial measures that may be required to address collapsible soils may include, but not be limited to, over-excavation of all uncontrolled artificial fill and upper portion of the surficial soils during site grading. Remedial measures to address liquefaction may include, but not be limited to, specialized compaction techniques and cement or chemical grouting. Prior to issuance of any grading permit, the San Bernardino County Building Official shall ensure that any and all remedial measures identified in the Project-specific geotechnical investigation are incorporated as notes on all final Project construction plans so that they may be implemented during Project grading and construction activities.

- MM 3.D-2 Prior to the issuance of any grading permit, the San Bernardino County Building Official shall confirm that the Grading Plan incorporates specific measures from the required design-level Project-specific geotechnical investigation to address lateral spreading. The geotechnical investigation report shall comport with the provisions established in Chapter 87.08, *Soils Reports*, and Chapter 88.02, *Soil and Water Conservation*, of the San Bernardino County Code. Remedial measures shall be undertaken as recommended by the licensed geotechnical engineer and approved by the County as part of the grading operation and construction phases. Remedial measures to address lateral spreading may include, but not be limited to: removal and re-compaction of near surface soils, the use of deep foundations and/or stone columns, and deep dynamic compaction. The remedial measures undertaken shall ensure that potential lateral movements calculated as part of the geotechnical exploration and analysis can accommodate habitable structures pursuant to CALGreen requirements as well as paved roads and wet or dry utilities, and thereby safeguard habitable structures, roads, and utility lines against potential seismic hazards. The findings of the geological explorations and recommendations shall be documented in a Project-specific geotechnical investigation report prepared by a licensed geotechnical engineer. The report shall be approved by the County and the recommendations contained in the report shall be implemented and required as grading permit and building permit conditions of approval. Prior to issuance of any grading permit, the San Bernardino County Building Official shall ensure that any and all remedial measures identified in the Project-specific geotechnical investigation are incorporated as notes on all final Project construction plans so that they may be implemented during Project grading and construction activities.

3.D.9 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Threshold a: Less-than-Significant Impact with Mitigation. Implementation of Mitigation Measure MM 3.D-1 would require the implementation of remedial measures from the required Project-specific geotechnical investigation be performed to further evaluate the potential hazards associated with landslides, and any remedial measures recommended by the future Project-specific geotechnical investigation be implemented prior to issuance of any grading permit. With implementation of Mitigation Measure MM 3.D-1, impacts associated with landslides would be reduced to levels that are less than significant.

Threshold c: Less-than-Significant Impact with Mitigation. Implementation of Mitigation Measures MM 3.D-1 and MM 3.D-2 would require would require the implementation of remedial measures from the required



Project-specific geotechnical investigation be performed to further evaluate the potential hazards associated with landslides, lateral spreading, liquefaction, and collapsible soils, and would also require that any remedial measures recommended by the future Project-specific geotechnical investigation be implemented prior to issuance of any grading permit. With implementation of Mitigation Measures MM 3.D-1 and MM 3.D-2, impacts associated with landslides, lateral spreading, liquefaction, and collapsible soils would be reduced to below a level of significance.



3.E HAZARDS

This Subsection describes existing conditions on the site and pertinent regulations that relate to fire hazards. The impact analysis focuses on identifying and evaluating the potential for implementation of the Project to result in significant fire hazards. Hazardous materials and wastes were determined to be a less-than-significant impact based on the Notice of Preparation (NOP) and Initial Study. The unique characteristics of the mountain environment and the wildland fires that have affected the mountain areas are considered in the following analysis.

3.E.1 ENVIRONMENTAL SETTING

3.E.1.1 WILDLAND FIRE HAZARD

A combination of climate, topography, vegetation, pathogen/insect infestation, human use/occupancy, and development patterns create high fire hazard risks throughout San Bernardino County. The areas of wildland-urban interface located in foothills and mountainous areas such as the Project site face the threat of wildfire (County of San Bernardino, 2007a, p. VIII-6). The Lake Arrowhead Community Plan area and the Project site are best classified as mixed interface, which is defined as an area where isolated homes are surrounded by large tracts of land (County of San Bernardino, 2007b, p. 23)

Wildland fire hazards are particularly acute in San Bernardino County due to its Mediterranean climate. This climate is characterized by hot, dry summers followed by wet, moderate winters. Prolonged dry periods from June to December leads to hazardous fire conditions until the winter rains start. Dry summer conditions are exasperated by the Santa Ana winds, which produce dry, gusty winds. When wind velocities and temperatures in hillside areas are high with relatively low humidity, fire hazard conditions become severe, and fires are often difficult to extinguish. High winds increase fire conditions by supplying fresh oxygen, fanning and spreading flames and fire brands, increasing air temperatures, and dehydrating both air and available fuels. Turbulent and erratic wind conditions exemplified by the Santa Ana winds could hinder firefighters on the ground as a result of unpredictable fire fronts. Many of California's most disastrous fires have occurred during extreme fire conditions that were precipitated by the onset of the Santa Ana winds. The fire of 2003 (a.k.a., The Old Fire), burned over 150,000 acres and destroyed over 1,000 homes and structures in San Bernardino County. Most recently, in August of 2016, the Blue Cut Fire burned over 36,000 acres and destroyed 321 homes and structures in the San Bernardino National Forest (Cal Fire, 2016).

The mountain regions of the County contain dense forest and have experienced drought conditions for the past fifteen years. The extended drought conditions caused the trees to become weak, which created a perfect environment for the Bark Beetles to proliferate from 2003 to 2008 and killed thousands of trees. The combined effects of the drought, dead trees, and density of the forest created severe burning conditions for the County's mountain areas. Additionally, the forested mountain areas attract visitors and due to the steep mountainous terrain, there are only five routes in and out of the area for nearly 60,000 residences in addition to visitors. These factors combined create severe safety hazards for the area. (San Bernardino County, 2017, p. 73)

In San Bernardino County, wildfire season commences in the summer when temperatures are high and humidity is low. Wildfire season in the County continues into the fall season, when the County experiences



high velocity, very dry winds originating from the desert areas. In addition, the statewide drought established in 2011 has also caused extremely dry conditions in the unincorporated areas of the County and has created fuel sources for wildfires. (San Bernardino County, 2017, p. 78)

The Mountain Area Safety Task Force (MAST) is a coalition of local, State, and federal government agencies, private companies, and volunteer organizations in San Bernardino and Riverside counties that work together to prevent and reduce the consequences of catastrophic wildfires. MAST provides information about fire prevention and emergency evacuation to the surrounding communities to promote public safety and fire prevention. As identified by MAST, the closest evacuation route to the Project site is Highway 18. (MAST, 2003)

The San Bernardino County Fire Department (SBCFD) provides fire protection and emergency medical services to the mountain communities, including the Project site and its vicinity, with two fire stations. Station 26 (Twin Peaks Station), located approximately 1.2 miles northwest of the Project site, is fully staffed by two firefighters, one paramedic, and 12 Paid Call Firefighters (PCF) 24 hours and 365 days each year. Response time from this station to the Project site is approximately six to eight minutes. Station 30 (Rim Forest Station) is located closest to the Project site. This station is approximately 0.5 mile west of the site and is a full-engine company staffed by 10 PCFs. PCFs carry radio pagers and are dispatched to incidents where additional crews are required. Response times vary because this station is staffed by PCFs. In addition, Station 11 (Sky Forest, United States Forest Service Station) is located approximately 2 miles east of the site and is staffed by a five-man crew during the fire season (approximately March through November). Response time from Station 11 is approximately six to eight minutes (Tom Curtis, 2009).

Fire Station 26 has multiple engines, including Engine 26, Rescue 26, Utility 26, and an ambulance, that are currently assigned to this station. This station is also equipped with a snow cat and loader. Stations 30 and 11 are one-engine companies with associated water vehicles. Station 11 also includes a utility vehicle. (Tom Curtis, 2009)

As a result of the Western Pine Bark Beetle epidemic affecting the San Bernardino National Forest, approximately 2,800 dead trees of various sizes were removed from the Project site from October 2004 through February 2005, with the largest percent being Ponderosa and Coulter pines (John B. Hatcher, 2005) (Hatcher & Bridges, 2003). A 2003 Foresters Report inventory estimated that of the approximately 3,969 trees six inches in diameter and larger located on the Project site before 2004, about 70 percent of the trees on the site were removed as a fire preventative measure (Hatcher & Bridges, 2003).

In addition to the bark beetle concern, MAST and the San Bernardino County Fire Department (SBCFD) have an ongoing Large Tree Removal Program to remove dead, dying, and diseased trees. In a new phase of the Large Tree Removal Program, MAST and the SBCFD have partnered with the Natural Resources Conservation Service (NRCS) to also remove other vegetation (both live and dead) from selected properties in the San Bernardino Mountains. The objective of this Program is to reduce the rate of spread and intensity of potential wildfires by removing, thinning, or pruning flammable vegetation to obtain a vertical/horizontal separation of



fuels.¹ Under this Program, tree and vegetation removal on the Project site due to this emergency action occurred during September and October of 2008. All work was reviewed and approved by a County of San Bernardino Registered Professional Forester and the California Department of Forestry and Fire Protection (Cal Fire) prior to removal. (MAST, 2017). Additionally, the Department of Forestry and Fire Protections approved the Project site to be thinned of trees and potential fire hazards on September 13, 2013, with tree-removal concluding November 2013 (Department of Forestry and Fire Protections, 2013).

Evacuation routes have been prepared by the Office of Emergency Services (OES) as well as MAST to ensure the efficient evacuation of all residents in the event that a wildfire or other emergency occurs. Both OES and MAST prepare specific evacuation plans for the Mountain Region where route planning, early warning and agency coordination are essential to conducting an evacuation. OES is responsible for monitoring population growth as well as road capacities. The Project site is located in Area 1 as designated by MAST Mountain Area Emergency Routes. The ideal emergency routes to evacuate Area 1 are Highway 18, Highway 173, and Highway 189. In the event that the Project site requires evacuation, Highway 18, Daley Canyon Road, and Highway 189 would be used to evacuate the Project site. (MAST, 2003)

3.E.2 REGULATORY FRAMEWORK

3.E.2.1 REGIONAL

A. San Bernardino County Fire Department

The San Bernardino County Fire Department (SBCFD) has established a set of fire protection planning requirements including: standard and non-standard conditions for development projects, site grading, map recordation (for each phase), issuance of a building permit, and building occupancy. These standards include, but are not necessarily limited to: compliance with the current Uniform Fire Code requirements and all applicable statutes, code, ordinances, and standards of the SBCFD, submittal of evacuation plan to the SBCFD for review and approval, and prior to any land disturbance, ensure that the applicant submits a written agreement signed by the applicant to either provide, or to contract to provide, on-going road maintenance, vegetation maintenance, and snow removal for primary access routes, secondary access routes, and all internal drives that are not otherwise maintained by a public agency.

B. County of San Bernardino Development Code – Fire Safety Overlay

The Fire Safety (FS) Overlay was created by San Bernardino County to establish additional development standards for areas prone to wildland brush fires (San Bernardino County, 2018). As shown on the County's Hazard Overlay Map, the Project site is located within Fire Safety Area 1 (FS1) (San Bernardino County, 2010b). FS1 includes areas generally within the San Bernardino National Forest boundary and are characterized by moderate and steep terrain and moderate to heavy fuel loading, which contribute to high fire hazard conditions. FS1 has specific standards that include, but are not limited to the following: have at least two points of ingress/egress for vehicles, implementation of an erosion control plan that is compliant with the Development Code, and a permanent fuel modification area that is compliant with the San Bernardino County Development Code (San Bernardino County, 2018).

¹ Frank Losekoot, County Forester, San Bernardino County Fire Department, correspondence dated January 17, 2008.



3.E.3 THRESHOLDS OF SIGNIFICANCE

A project would have a significant effect associated with wildland fires if it were to result in one or more of the following:

- a. *Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan*
- b. *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*
- c. *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area*
- d. *For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area*

No impact analysis was conducted pursuant to the following threshold questions from Appendix G of the State CEQA Guidelines due to the lack of its applicability to the Project:

- e. *Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials*
- f. *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?*
- g. *Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school*
- h. *Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment*

Hazardous materials and wastes were determined to be a less-than-significant impact based on the Notice of Preparation (NOP) and Initial Study, and were scoped out of the preparation of this DREIR.

3.E.4 ENVIRONMENTAL IMPACTS

3.E.4.1 METHODOLOGY

The analysis for the Project's potential impacts on fire protection services was evaluated based on input from the SBCFD and consideration of SBCFD regulations and requirements that relate to the provision of fire protection service to the Project site. The analysis considers whether the proposed Project would coincide with applicable fire protection requirements and standards such as those relating to the on-site water system, road access, fire protection systems, fire flows, emergency/evacuation road access plans, and evacuation plan. The analysis for the Project's potential impacts relating to wildfire hazards is based on review of the FS Overlay



and fuel modification plan requirements, an evaluation of a Project-specific Evacuation Plan, prepared by the Timothy E. Paysen, PhD, Environmental Consultant (Paysen), and an evaluation of a Fuel Modification plan prepared by Paysen. The Project-specific Evacuation Plan and Fuel Modification Plan are included as *Technical Appendix E1* and *Technical Appendix E2*, respectively.

3.E.5 PROJECT FEATURES

The SBCFD has established a comprehensive set of fire protection planning requirements which are standard conditions that the proposed Project must demonstrate compliance with prior to Project approval, site grading, issuance of a building permit, and occupancy. These standard conditions, as well as non-standard conditions (including preparation and approval of an evacuation plan), would be included as part of the proposed Project to be reviewed and approved by the SBCFD prior to the issuance of construction permits.

The proposed Project would require the implantation of fuel modification zones (FMZs) is a requirement of the Project that would include approximately 1.9 acres of the Project site. Of the 1.9 acres of FMZs, 85.07 sq. ft. would be categorized as defensible space zone 2 (hereafter referred to as “FMZ 2”), while 80,550.48 sq. ft. would be categorized as defensible space zone 3 (hereafter referred to as “FMZ 3”). The proposed fuel modifications would not extend off-site. FMZ 2 would extend to 30 feet from the northwest corner of the proposed maintenance building/caretaker’s residence. All dead logs, branches, litter, and any decaying organic material (i.e., leaves, needles, and woody material) would be removed from the ground within FMZ 2. Trees are required to be thinned or removed so that there is approximately 20 to 30 feet of distance between tree stems. FMZ 3 would extend 200 feet from the Project’s proposed on-site buildings. All dead logs, branches, litter, and decaying organic material (i.e., leaves, needles, and woody material) would be removed from the ground within FMZ 3. Standing dead material, stems, vines, and non-productive trees would be removed from FMZ 3, with some tree thinning and pruning as necessary. (Payson, E. T., 2017a)

The standard and non-standard conditions and requirements for fire prevention include: provision of a permanent fuel modification zone, compliance with water main, fire hydrant and fire flow standards, fire sprinklers and fire alarm systems, approved emergency/evacuation road access plans, an evacuation plan, and a host of other requirements to support compliance with the Uniform Fire Code, the FS Overlay, and all applicable statutes, codes, ordinances and conditions of the SBCFD. Refer to *Technical Appendix E2* for a copy of the Project’s conditions and requirements pertaining to wildfire protection.



3.E.6 IMPACT ANALYSIS

Threshold a) *Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*

1. *Emergency Response*

Under existing conditions, emergency access and evacuation routes occur within the vicinity of the Project site. Evacuation to the south of the Project site is provided by SR-18, while evacuation to the north is available via SR-138. SR-189 provides an alternative northern evacuation route; however, this route would only be used by occupants of the Project site if time constraints do not exist or if there are no other alternative routes. (Payson, E. T., 2017b, p. 8). In the event that a fire threatens the Project site from the south, evacuation from the Project site would be expected to occur via SR-18 and with travel towards Lake Silverwood and the I-15 freeway, or towards the Big Bear Lake area along SR-18 to the east. (Payson, E. T., 2017b, p. 11)

In the event of a major fire or emergency incident, evacuation plans would be put in place as directed by the Church Director or their designee in accordance with the Project-specific *Evacuation Plan* (DREIR *Technical Appendix E1*). Emergency agencies would be expected to be involved in the implementation of the evacuation plan including the USFS, the San Bernardino County Sheriff's Department, Cal Fire, and/or the California Highway Patrol. Due to the nature of the proposed use of the Project as a community church, the vast majority of the site occupants are anticipated to already live in the nearby mountain communities; therefore, the Project would not meaningfully change the number of people requiring evacuation down the mountain during a major wildfire (Parmelee, 2005). None of the physical improvements proposed by the Project would adversely affect evacuation routes. The proposed traffic signal at the intersection of SR-18 and the proposed Project Drive would not adversely impact the evacuation because the roadway improvement would not impede access to SR-18, which is a MAST designated evacuation route. With ongoing preplanning and coordinating efforts by local and regional fire departments and other agencies, impacts associated with emergency evacuation beyond the site are considered less-than-significant.

2. *Fire Service Level*

The vast majority of prospective site occupants are likely to already reside in the area and are presently served by SBCFD; however, the Project site anticipates a maximum site occupancy of approximately 900 people, which would increase the demand for fire services at the Project site in the event of an emergency.

Fire services for the Project are provided by SBCFD Fire Station 26, with nearby support also available from SBCFD Fire Station 30, and USFS Fire Station 11. In regards to fire response, all three fire stations are located in proximity to the proposed Project site, which would allow for an adequate response time in the event of an emergency. The closest station, Fire Station 30 is located approximately 0.5 miles west of the site; Fire Station 26 is located within 1.2 miles of the site, and Fire Station 11 is located approximately 2.0 miles east of the site (Google Earth, 2018).

The SBCFD includes both full-time staff and PCFs. The PCFs are trained local area residents that supplement SBCFD services on an on-call/as-needed basis. With readily available PCF, the Fire District is able to dispatch additional crews and staff from available stations, when required. Based on the availability of PCF, the proposed Project, which would primarily serve area residents, is not expected to pose a constraint on the



capacity of the SBCFD that would require new or substantially expanded services. In the event of a major fire or incident that cannot be handled by SBCFD, assistance would be requested from other fire agencies in the area or beyond under the California Fire and Rescue Mutual Aid system.

The mutual aid system supports expedient mobilization and response from available local, regional, statewide and out of state resources as appropriate. Demand for fire services would also be reduced through Project compliance with applicable statutes, codes, ordinances, and standards of the SBCFD that are focused on fire prevention. Based on the discussion above, impacts on the provision of fire protection services are considered less-than-significant.

3. Fire Flow

In accordance with the SBCFD and the Uniform Fire Code, the proposed Project is required to provide fire flow at a rate of 3,750 gpm for a 3-hour duration at a residual operating pressure of 20 pounds per square inch (psi) (CBSC, 2016). These fire flow requirements are based on a 46,309-square foot assembly building. Furthermore, standard conditions of approval imposed by SBCFD require that prior to land disturbance, water systems be designed to meet the required fire flow for the Project and that water system improvement plans be submitted to SBCFD for review and approval. Compliance with these and other fire system requirements would ensure that the Project would have sufficient fire-fighting flow rates to quell a potential fire risk on-site. Thus, the Project would not create potential fire hazards related to inadequate fire flow; therefore, impacts related to fire flow are considered less-than-significant.

The SBCFD includes both full-time staff and PCF. The PCF are trained local area residents that supplement SBCFD services on an on-call/as-needed basis. With full-time staff and PCF, the SBCFD is able to dispatch crews and staff from available stations, when required. The proposed Project, which primarily serves area residents, is not expected to pose a constraint on the capacity of the SBCFD that would require new or substantially expanded fire service facilities.

Threshold b) 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?

According to the California Fire Hazard Severity Zone Map, the Project site is located in a “Very High Fire Hazard Severity Area” in a Local Responsibility Area. (CalFire, 2008) Potential impacts associated with siting development within an area prone to wildland fires include property damage and personal injury. In converting undisturbed land to developed land, the proposed Project would increase the potential to expose people and structures to wildland fire hazards. As described above in Subsection 3.E.5, *Project Features*, the Project would be required to demonstrate compliance with the standard and non-standard conditions and regulatory requirements for fire prevention, which include: provision of a permanent FMZ; compliance with water main, fire hydrant, and fire flow standards; fire sprinklers and fire alarm systems; approved emergency/evacuation road access plans; an evacuation plan; and a host of other requirements to support compliance with the Uniform Fire Code, the FS Overlay, and all applicable statutes, codes, ordinances, and conditions of the SBCFD.

The SBCFD has established a set of standard conditions for fire protection planning requirements including provisions of a fuel modification area, emergency evacuation/access plans, water system plans and a host of



other features. Under SBCFD Standards, phased projects are required to provide temporary fuel modification areas during each phase of the Project.

Upon completion of the final phase, a permanent fuel modification area would be maintained on the Project site and assured through ongoing maintenance by the on-site caretaker. A Preliminary Fuel Modification Plan for the proposed Project requires brush clearance within 100 feet of all proposed structures. Compliance with the requirements of the approved FMZ would help reduce the potential risk of fire on-site and protect the site from fires that have the potential to begin in the proposed Project area. The Fuel Modification Plan proposes to remove leaf litter, and other potentially flammable hazards, as well as thin out or remove trees so that there are 20 to 30 feet between tree stems (Payson, E. T., 2017a, p. 6). To date, the Project has been designed to meet or exceed requirements established by the SBCFD and USFS. The design features incorporated into the Project, along with other mandatory requirements imposed by the SBCFD, would assist in fire protection and prevention by reducing (1) impacts to fire protection services, (2) the risk of exposure to wildland fire hazards, and (3) the potential for fire accidents and the spread of fire. Proof of compliance with applicable fire protection planning requirements would be required as a standard condition of Project approval, site grading, issuance of building permit, and Project occupancy. Accordingly, the potential impacts of the Project relative to fire hazards would be less than significant.

Threshold c) *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?*

Threshold d) *For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?*

The Project site is located approximately 11.0 miles south of the Hesperia Airport and 25 miles northeast of the Ontario International Airport (Google Earth, 2018). Additionally, according to the San Bernardino General Plan Hazards Overlay Map, the Project site is not located within an Airport Safety Review Area; therefore, the Project does not have the potential to expose people residing or working in the Project area to hazards associated with public airport or private airstrips. (San Bernardino County, 2010) No impact would occur.

3.E.7 CUMULATIVE IMPACTS

As with the proposed Project, the related projects identified in Table 1-2 of Section 1.0, are subject to discretionary review, including an evaluation of the adequacy of fire services and the need for mitigation measures and compliance with requirements established by the SBCFD and USFS such as the provision of fuel modification zones, participation in the Large Tree Removal Program, and preparation of an evacuation plan to ensure that appropriate fire hazard risks are reduced. With the provision of project-by-project mitigation and review and approval by the SBCFD and USFS, the proposed Project, in conjunction with other past, present, or reasonably foreseeable future projects, would not result in a significant cumulative impact related to fire hazards. Based on the hazards analysis provided, environmental impacts related to wildland fires are anticipated to be less-than-significant.



3.E.8 SIGNIFICANCE BEFORE MITIGATION

Threshold a: Less-than-Significant Impact. The Project would not impair the implementation of physically interfere with an adopted emergency response plan or emergency evacuation plan. The Project would not substantially increase or decrease the number of people requiring evacuation down the mountain during an emergency. Additionally, the Project would implement the adopted emergency Evacuation Plan and coordinate with local and regional fire departments. Therefore, impacts relating to implementation of an emergency plan would be less-than-significant.

Threshold b: Less-than-Significant Impact. The Project site is located within a “Very High Fire Hazard Severity Area” in a Local Responsibility Area. The Project would increase the potential to expose people and structures to wildland fire hazards on the site. However, the Project would be required to demonstrate compliance with State, regional, and local standard and non-standard conditions and regulatory requirements. Additionally, the Project would be required to provide proof of compliance with applicable fire protection planning requirements to the SBCFD. Therefore, impacts related to exposing people and structures to wildland fire hazards are less-than-significant.

Threshold c and d: Less-than-Significant. According to the San Bernardino General Plan Hazards Overlay Map, the Project site is not located within an Airport Safety Review Area. Therefore, the Project does not have the potential to expose people working or residing in the Project area to hazards related to public airports or private airstrips. Impacts are considered less-than-significant.

3.E.9 MITIGATION MEASURES

3.E.9.1 APPLICABLE COUNTY REGULATIONS AND DESIGN REQUIREMENTS

The following are applicable regulations and design requirement will be imposed on the Project by San Bernardino County pursuant to the County’s Development Code. Although these requirements technically do not meet CEQA’s definition for mitigation because they are regulatory requirements, they are specified herein to document required Project compliance with applicable County regulations.

- The Project will comply with the San Bernardino County Fire Safety Overlay Fire Safety Area 1 requirements specified in County Development Code Chapter 82.13.

3.E.9.2 MITIGATION MEASURES

No mitigation measures are required.

3.E.10 LEVEL OF SIGNIFICANCE AFTER MITIGATION

As indicated above, less-than-significant fire hazard impacts would be associated with the proposed Project; thus, no mitigation measures are required.



3.F HYDROLOGY AND WATER QUALITY

This Subsection addresses the proposed Project's potential to impact drainage patterns, groundwater supply and recharge, and surface and groundwater water quality during both Project construction and operation. This Subsection also provides an analysis of water supply based on the proposed Project's estimated water demand. Information regarding groundwater hydrology is based on an Engineering Geology and Soils Investigation, dated November 2001, prepared by LOR Geotechnical Group, Inc., which is included as *Technical Appendix D* of this DREIR. The analysis of surface drainage impacts is based on a Drainage Study included as *Technical Appendix F*, dated July 2005 (revised April 2018), prepared by W.J. McKeever, Inc. Information pertaining to water quality is based on a Project site -specific *Water Quality Management Plan (WQMP)* included as Appendix I of DREIR *Technical Appendix F*. The analysis of water demand for the Project is based on the Water Service Requirement calculations, dated July 18, 2006, prepared by W.J. McKeever, Inc (PCR, 2010b, Technical Appendix F).

3.F.1 ENVIRONMENTAL SETTING

3.F.1.1 EXISTING HYDROLOGICAL CONDITIONS

A. Regional

The Project site and vicinity lie within the Mojave Watershed boundary, which is located entirely within San Bernardino County and includes approximately 1,600 square miles of total drainage. Approximately 210 square miles of this drainage area are located in the San Bernardino Mountains, which are the headwaters for the Mojave River system.¹ Elevations within the watershed range from approximately 8,500 feet above mean sea level (amsl) at Butler Peak (approximately 15 miles east of the Project site) in the San Bernardino Mountains to 1,400 feet amsl at Afton Canyon near the terminus of the Mojave River (approximately 40 miles northeast of the City of Barstow just east of Interstate 15). Although, the Project site is located on the boundary of the Lahontan and Santa Ana Basin Plan, the Santa Ana RWQCB's Water Quality Control Plan for the Santa Ana River Basin (Region 8) is the governing water quality plan for the region.

According to the United States Geological Survey (USGS) Report 2011-5234, the Mojave River Watershed can be divided into sub-basins based on hydrologic features. The five hydrologic sub-basins include: (1) Alto; (2) Oeste; (3) Centro; (4) Baja, and (5) Este. The Project site is located within the Alto sub-basin, which is the southernmost of the sub-basins in the watershed. (USGS, 2011)

B. Off-site

The off-site watershed areas that contribute runoff to the Project site are generally located to the west of the site. The off-site tributary areas are illustrated on the map labeled "Drainage Map Undeveloped" contained in Appendix F of the Project site's Drainage Study (DREIR *Technical Appendix F*). Generally, the offsite watershed consists of vacant forested land, residential areas and limited commercial development. The off-site watershed is categorized into sub-areas, or nodes, for the purpose of the analysis that was conducted in the

¹ Maxwell, Christopher R., *A Watershed Management Approach to Assessment of Water Quality and Development of Revised Water Quality Standards for the Ground Waters of the Mojave River Floodplain*, 2000.

(Footnote continued on next page)



Drainage Study. Each of the sub-areas have a soil group designation of “D,” which corresponds to a high runoff potential with the soil having slow infiltration rates consistent with clay soils.² Additionally, the sub-areas contain no blue lined streams or named drainage ways.

Substantial off-site flows enter the Project site at two locations. The first, herein referred to as “Flow Entrance A,” is located on the north side of Highway 18 at the southwest corner of the site. The second, referred to as “Flow Entrance B,” is located on the north boundary of the Project site approximately 350 feet east of the northwest corner of the site. Under existing conditions, there are no drainage or storm drain improvements on the Project site. Off-site flows entering the site are directed to an existing natural drainage that traverses diagonally through the site from the southwest corner and out through the center of the Project site.

C. On-site

The Project site is currently undeveloped, with hilly to steep mountain terrain largely covered by montane coniferous forest. The Project site includes a northeasterly trending valley that runs along the center of the site and falls to the northeast. Elevations across the Project site vary slightly from a high of approximately 5,740 feet amsl at the western border to a low of approximately 5,400 feet amsl at the northeast corner of the Project site. The majority of the Project site contains slopes that range from 0 to 40%, with approximately five acres of steep slopes over 40%. With steep slopes on the Project site, the Time of Concentration (T_c) storm water on the Project site is minimal in sloping areas, which results in increased flow intensity for any given storm event.

On-site flows contained within the natural drainage course exit through the center of the Project site. The natural drainage course continues in a northwesterly direction and northerly along Daley Canyon Road. Flows within the natural drainage course are tributary to the headwaters of Little Bear Creek, which generally traverses northerly adjacent to Daley Canyon Road and then turns northeasterly generally adjacent to Highway 189 where Little Bear Creek then flows to Lake Arrowhead. In total, the flow length of Little Bear Creek prior to entering Lake Arrowhead is approximately 1.5 miles. Overall, in the existing condition, the Project site results in the conveyance of stormwater flows during peak events in the amount of 550.15 cubic feet per second (C.F.S.) to off-site properties.

In addition, there are approximately five acres between the Project site and Daley Canyon Road where flows run northerly along Daley Canyon Road and are discharged into the natural drainage course at the northeast corner of the Project site. Thus, these flows eventually merge with flows exiting the Project site.

The Project site is not located within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map according to FEMA Flood Insurance Rate Map (FIRM) No. 06071C7955H, or other County map delineating flood hazards. Thus, the Project site is not susceptible to flood-related hazards.

² Soil designations identified in the Drainage Study were derived from the San Bernardino County Hydrology Manual. August 1986. Available: <http://cms.sbcounty.gov/Portals/50/floodcontrol/HydrologyManual.pdf>



D. Rimforest Flood Control Project

The County of San Bernardino has approved plans in place to construct and maintain a series of drainage facilities to address notable erosion and landsliding events that occur in the southern Rimforest Community. The approved Rimforest Storm Drain Project is planned to restore drainage runoff from north of SR-18 into Little Bear Creek, which subsequently drains into Lake Arrowhead. The Rimforest Storm Drain Project would be constructed in two (2) phases. Phase 1 would include approximately 0.8 miles of flood control improvements, comprised of approximately 0.2 miles of channel/basin and approximately 0.6 miles of pipe culvert and appurtenances. Phase 1 improvements would convey runoff from the Rimforest Community to Little Bear Creek in a northeasterly direction. Phase 2 of the Rimforest Storm Drain Project would include the installation of a culvert system to direct runoff from Pine Avenue and under SR-18 to join flows restored by Phase 1 to Little Bear Creek. The Phase 2 culvert system would include street inlets and storm drains within Rimforest. The Rimforest Storm Drain Project's proposed Pine Avenue culvert system (discharge point) would be located within the southwest corner of the proposed Church of the Woods' Project site.

The Rimforest Storm Drain Project is expected to be under construction prior to the development of the proposed Project. However, there remains a potential for the proposed Project's construction to be initiated prior to the County's planned Rimforest Storm Drain Project. Under this scenario, the proposed Project would construct a part of the proposed Rimforest Storm Drain Project's Pine Avenue culvert system, which would initiate at an existing storm drain located at the southwest corner of the Project site. Therefore, under this scenario it is anticipated that flows associated with the proposed Rimforest Storm Drain Project would be transmitted through the proposed Project's storm drain system and discharged into the proposed Rimforest Storm Drain Project's attenuation basin(s) located north of the Project site's northeast corner and within Little Bear Creek.

3.F.1.2 WATER QUALITY

A. Surface Water Quality

A net effect of development can be to increase pollutant export over naturally occurring conditions. The impact of the higher export can be on the adjacent water bodies and also on the downstream receiving waters. An important consideration in evaluating storm water quality from a project is to assess if it impairs the beneficial use to the receiving waters. Receiving waters can assimilate a limited quantity of various constituent elements, however, there are thresholds beyond which the measured amount becomes a pollutant and results in an undesirable impact. Background of these standard water quality categories provides an understanding of typical impacts.

Sediment - Sediment is made up of tiny soil particles that are washed or blown into surface waters and is the major pollutant by volume in surface water. Suspended soil particles can cause the water to look cloudy or turbid. The fine sediment particles also act as a vehicle to transport other pollutants including nutrients, trace metals, and hydrocarbons. Construction sites are typically a large source of sediment.

Nutrients - Nitrogen, phosphorous, and potassium are the major nutrients used for fertilizing landscaped areas. Heavy use of commercial fertilizers can result in discharge of nutrients to water bodies where they may cause excessive algae growth.



Trace Metals - Trace metals are primarily a concern because of their toxic effects on aquatic life and their potential to contaminate drinking water supplies. The most common trace metals found in runoff are lead, zinc, and copper. Fallout from automobile emissions is a major source of lead in urban areas. Materials such as galvanized metals, paint, or preserved wood may also contain metals.

Oil and Grease - Oil and grease contain a wide variety of hydrocarbons some of which could be toxic to aquatic life even in low concentrations. These materials initially float on water and create the familiar rainbow-colored film. Hydrocarbons have a strong affinity for sediment and quickly become absorbed to it. The major sources of hydrocarbons are through leakage of crankcase oil and other lubricating agents from automobiles. High hydrocarbon levels are typically found in the runoff from parking lots, roads, and service stations.

Other Toxic Chemicals - If improperly stored and/or disposed of, synthetic organic compounds (such as adhesives, cleaners, sealants, and solvents) could have a significant impact on receiving waters.

Miscellaneous Wastes - These may include wash water from concrete mixers, paints and painting equipment cleaning activities, solid wastes from land clearing activities, wood and paper material from packaging of building material, and sanitary wastes. Improper/illegal disposal of these wastes can lead to polluted waterways.

The quantity of a material in the environment and its characteristics determine the degree of availability as a pollutant in surface runoff. In a developed environment, the quantity of certain pollutants in the environment is a function of the intensity of the land use. For instance, a high density of automobile traffic makes a number of potential pollutants (such as lead and hydrocarbons) more available. The availability of a material, such as a fertilizer, is a function of the quantity and the manner in which it is applied. Applying fertilizer in quantities that exceed plant needs leaves the excess nutrients available for loss to surface or ground water.

The physical properties and chemical constituents of water traditionally have served as the primary means for monitoring and evaluating water quality. Evaluating the condition of water through a water quality standard refers to its physical, chemical, or biological characteristics. Water quality parameters for storm water comprise a long list and are classified in many ways. In many cases, the concentration of pollutant is needed to assess a water quality problem, instead of the annual pollutant loads. Some of the typical physical, chemical or biological characteristics used to evaluate the quality of the surface runoff include dissolved oxygen, biochemical oxygen demand, chemical oxygen demand, total dissolved solids (TDS), pH, alkalinity, specific conductance, turbidity, nitrogen, and phosphorus levels.

Currently, the Project site is undeveloped consisting of hilly to steep mountain terrain largely covered by montane coniferous forest. The expected pollutants in the existing condition storm water runoff from the site include sediments, trash and other miscellaneous debris from infrequent human activity on the site.

As discussed above, the Project site is located at the headwater of Little Bear Creek, which flows to Lake Arrowhead. According to the most recent CWA Section 303(d) List of Water Quality Limited Segments, approved by the United States Environmental Protection Agency (USEPA) in October 2011, neither Little Bear Creek nor Lake Arrowhead were identified as a water quality limited or “impaired” waterbody where water quality standards and/or receiving water beneficial uses have not been met (SRWCB, 2011).



3.F.1.3 GROUNDWATER QUALITY

There is no current data on the groundwater quality beneath the Project site. However, as discussed below, the Engineering Geology and Soils Investigation (*Technical Appendix D* of this DREIR) concludes that the groundwater at the site is anticipated to consist of insignificant amounts of perched water and limited amounts of water within the fractures of the bedrock.

3.F.1.4 EXISTING WATER SUPPLY

A. Crestline-Lake Arrowhead Water Agency

The Project site is located within the boundaries of the Crestline-Lake Arrowhead Water Agency (CLAWA). CLAWA's primary water supply source is the California State Water Project (SWP), with a secondary water source in Houston Creek. Table 3.F-1, *Current and Projected Water Supplies (acre-feet per year)*, depicts the Agency's estimated long-term water delivery schedule. As shown in this table, CLAWA's long-term projection for water supply is approximately 3,961 acre-feet (AF) per year. (CLAWA, 2011, p. 26).

Table 3.F-1 Current and Projected Water Supplies (acre-feet per year)

Water Supply Sources	2010	2015	2020	2025	2035
Available from DWR ^{1,2}	2,900	3,480	3,480	3,480	3,480
Locally produced groundwater	0	0	0	0	0
Local Surface Water ³	481	481	481	481	481
Transfers					
Exchanges In					
Recycled Water	0	0	0	0	0
Other					
Total	3,381	3,961	3,961	3,961	3,961

¹ 2010 availability based upon approved Department of Water Resources (DWR) allocation percentage of 50%.

² Future availability based upon State Water Project (SWP) long-term reliability of 60%.

³ Average total surface water available from Houston Creek via Lake Silverwood from 1989-2010.

Source: (CLAWA, 2011, Table 5)



Table 3.F-2, *CLAWA's Projected Water Demand*, lists CLAWA's tentative long-term water schedule through 2035 under several drought-year scenarios.

Table 3.F-2 CLAWA's Projected Water Demand^{1,3,4,5,6,7}

Year	Multiple Dry Year Delivery (Ac-Ft)	Single Dry Year Delivery (Ac-Ft)	Average Year Delivery (Ac-Ft)	Wet Year Delivery (Ac-Ft)
2011	1,200	1,060	1,000	600
2015	1,800	1,590	1,500 ²	875
2020	2,300	2,000	1,900	1,125
2025	2,525	2,200	2,090	1,250
2030	2,700	2,375	2,250	1,320
2035	2,850	2,500	2,370	1,425

¹ Refer to Figure 5 of the CLAWA UWMP for CLAWA's long-term annual water demand projections interpolated from the above.

² CLAWA's historical annual water demand from 1990-2010 averages about 1,500 ac-ft. Peak High annual water demands occurred in 1990 (2,057 ac-ft), 2004 (2,572 ac-ft), and 2007 (2,702 ac-ft). Peak Low annual water demands occurred in 1998 (757 ac-ft), 2005 (1,061 ac-ft), and 2007 (976 ac-ft).

³ CLAWA's retail improvement district water demands average about 0.2 ac-ft/service/year; comprising mainly residential (a blend of full-time and part-time residents), along with some commercial.

⁴ Refer to page 9 of the CLAWA UWMP for a written summary of future annual SWP water project by CLAWA's wholesale water purveyors, for years 2015, 2020, 2025, and 2030.

⁵ The SCAG households forecast (Figure 4 of the CLAWA UWMP) was utilized in projecting applicable portions of CLAWA long term water demands.

⁶ The above annual CLAWA Water demand projections include estimated growth in CLAWA's other deliveries along their wholesale transmission system (See Table 4 of CLAWA UWMP footnote)

⁷ The above annual CLAWA water demand projections also include allowances for fire protection water needed during possible wild land forest fires, water for possible contingencies, emergencies, normal unaccounted-for-water (UFW), and leaks.

Source: (CLAWA, 2011, Table 4A)

The CLAWA service area includes commercial uses oriented to tourists and seasonal residents as well as year-round residents. CLAWA maintains approximately 1,199 retail service connections and serves a population of approximately 2,750 permanent residents (CLAWA, 2011, p. 15). There are approximately 14,750 active service connections in the entirety of CLAWA's service area. Of the 14,750 connections, approximately 92% (13,551) are served by CLAWA's purveyor customers and the remaining 8% (1,199) connections are served directly by CLAWA. CLAWA's water is sold on a wholesale basis to retail water purveyors who then combine the water they receive from the Agency with their own local well water supplies for delivery to their retail customers. Table 3.F-3, *CLAWA's 2010 Water Demand Deliveries by Customer Category*, summarizes CLAWA's water deliveries for the year 2010 and is intended to give a breakdown of CLAWA's water deliveries by customer category.



Table 3.F-3 CLAWA's 2010 Water Demand Deliveries by Customer Category

Customers	CLAWA's 2010 Water Deliveries	
	Water Deliveries (Ac-Ft)	Percent of Water Deliveries (%)
Retail Improvement District "A"	7	0.7
Retail Improvement District "B"	128	13.1
Retail Improvement District "C"	26	2.7
Retail Improvement District "D"	69	7.1
Wholesale Water Purveyors	635	65.0
Wholesale Other Water Customers*	111	11.4
Total Water Use	976	100

**Other Deliveries along Wholesale Transmission System: Purveyor Retail (12 meters), CLAWA Office, Private Camps/Schools, County Annex Office/Road Yard, USFS Campgrounds/Heliport, State Parks & Recreations- Silverwood, and some Commercial Facilities.*

Source: (CLAWA, 2011, Table 4)

In addition, CLAWA has established a Water Conservation Program that prohibits wasteful water use, limits water consumption, and applies surcharges for excessive water use. As currently applied, under a Stage 1 Emergency customers are limited to 95% of their 1990 consumption. Under Stages 2 through 5, water use in excess of the applicable percentages (up to 60% of 1990 consumption for Stage 5) shall be subject to additional surcharges. The Water Conservation Program also includes the following conservation actions directed at customers: distribute water saving devices and kits to customers within its retail service area; and implement a public information program regarding water conservation.³

B. Water Sources

1. State Water Project

CLAWA's long-term water supply is based on the reliability of the SWP for 70% allocations and an average appropriation from Houston Creek of 481 AF/year. The DWR allocates water from the SWP to 29 contracting water agencies in the State of California. The SWP diverts, stores, and distributes water throughout the State through a system of reservoirs, aqueducts, power plants, and pumping plants. The SWP also provides flood control, power generation, recreation, fish and wildlife protection, and water quality management in the Sacramento-San Joaquin River Delta (Delta). The SWP's watershed encompasses the mountains and waterways around the Feather River, which flow into Lake Oroville and other smaller lakes. When water is needed, Lake Oroville releases water into the Feather River, which converges with the Sacramento River and eventually into the Sacramento-San Joaquin Delta. From the Delta, it is pumped at the Banks Pumping Plant into the 444-mile-long California Aqueduct. Water in the mainstem of the California Aqueduct flows south by gravity into the San Luis Joint-Use Complex, which was designed and constructed by the federal government and is operated by the Department of Water Resources. CLAWA is one of the 29 agencies authorized to receive direct water deliveries from the SWP pursuant to a contract with DWR. The Agency can only plan on receiving an average of 3,480 ac-ft of water per year over the next 20-year projection. (CLAWA, 2011, pp. 24-26)

³ *Crestline-Lake Arrowhead Water Agency, 2010 Urban Water Management Plan, August 2011, Appendix E.*



2. Local Surface Water

In 1991, the California State Water Resources Control Board (SWRCB) issued two permits that allow appropriations of water from Houston Creek, a tributary leading into Lake Silverwood, of up to 1,302 AF per year. Actual diversion quantities vary depending upon annual amounts of precipitation and are limited to the amount of return flow to the Mojave Watershed each year. As an example, reports for water years 1992-93 and 1996-97 filed with the SWRCB list 617 and 608 AF of water, respectively, appropriated pursuant to these permits. The reliability of supply from Houston Creek is dependent upon local factors such as precipitation, surface water management, and possible groundwater production by others. The average amount of water appropriated from the Houston Creek per year is 481 acre-foot (ac-ft) (CLAWA, 2011, p. 26).

3. Recycled Water

To date, CLAWA has made no use of recycled water. Historically the RWQCB prohibited the use of recycled water above 3,200 feet in the San Bernardino Mountains. In 2004, the State Water Resources Control Board and USEPA approved a Basin Plan amendment to allow the discharge of treated waters of waste origin above the 3,200-foot elevation. However, because of climate, topography, and development patterns in the mountains, the CLAWA district contains few sizable landscaped areas where recycled water could be efficiently used for irrigation. In addition, CLAWA has no industrial uses and, thus, no primary market for recycled water. The lack of potential users currently makes the construction of dual water systems economically unfeasible. (CLAWA, 2011, pp. 30-31)

3.F.1.5 GROUNDWATER

Groundwater is typically defined as the part of subsurface water within the saturated zone, or generally, water located below the surface. According to the Engineering Geology and Soils Investigation prepared for the Project site (*Technical Appendix D* of this DREIR), groundwater was not encountered in any of the trenches dug at the Project site, nor were there any seeps noted. In addition, the hard, non-porous nature of the underlying bedrock at the site tends to minimize groundwater, except within fractures. However, along the upper portion of the valley in the center of the site the lush vegetation and reeds tend to indicate the presence of shallow groundwater. Therefore, this area may have some groundwater perched over the bedrock or within the fractures.

The Project site's Engineering Geology and Soils Investigation states that according to USGS topographical data, there is the presence of a groundwater well in the small valley near the southwestern portion of the site. The Southern California Water Company reportedly drilled this well as an exploratory well in the late 1970s or early 1980s. The rights to this well were then purchased by Big Bear Municipal Water District (BBMWD). According to the BBMWD, there are few remaining records in its files related to this well. However, the BBMWD notes that while groundwater was encountered at a relatively shallow depth, it was not sufficient for production. The well was abandoned and capped at a depth of five feet below the ground in the early 1980s.

Overall, based on the data cited above, the Engineering Geology and Soils Investigation concludes that the groundwater at the site is anticipated to consist of insignificant amounts of perched water and limited amounts of water within the fractures of the bedrock.



3.F.1.6 JURISDICTIONAL "WATERS OF THE STATE"

According to a 2018 Habitat Assessment prepared by ELMT for the Project site, (see *Technical Appendix C* of this DREIR) approximately 0.10 acres of jurisdictional ephemeral and perennial but non-wetland waters of the State and approximately 0.05 acres of jurisdictional "waters of the U.S." occur within the Project site's boundaries. Because the Project would impact approximately 0.10 acres of jurisdictional waters of the State and approximately 0.05 acres of jurisdictional "waters of the U.S.," approval from State and federal regulatory agencies is required (i.e., RWQCB Section 401 permit, California Department of Fish and Wildlife Section 1602 Streambed Alteration Agreement, and U.S. Army Corps of Engineers Section 404 Nation Wide Permit). Please refer to Subsection 3.C, Biological Resources, for further discussion regarding impacts to jurisdictional waters.

3.F.2 REGULATORY FRAMEWORK

Hydrology and water quality are regulated at the Federal, State, and local levels. The U.S. Army Corps of Engineers (ACOE), USEPA, the SWRCB, the Lahontan and Santa Ana RWQCBs, and the County of San Bernardino regulate hydrology and water quality in the Project area.

3.F.2.1 FEDERAL

A. Federal

1. *Federal Clean Water Act*

The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. The basis of the CWA was enacted in 1948 and was called the Federal Water Pollution Control Act, but the Act was substantially reorganized and expanded in 1972. "Clean Water Act" became the Act's common name with amendments in 1972. Under the CWA, the Environmental Protection Agency (EPA) has implemented pollution control programs such as setting wastewater standards for industry, and also has set water quality standards for all contaminants in surface waters. The CWA made it unlawful to discharge any pollutant from a point source into navigable waters, unless a permit was obtained. EPA's National Pollutant Discharge Elimination System (NPDES) permit program controls discharges. Point sources are discrete conveyances such as pipes or man-made ditches. Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need an NPDES permit; however, industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters. (EPA, 2017a)

2. *Federal Flood Insurance Program*

The U.S. Congress established the National Flood Insurance Program (NFIP) with the passage of the National Flood Insurance Act of 1968. The NFIP is a Federal program enabling property owners in participating communities to purchase insurance as a protection against flood losses in exchange for State and community floodplain management regulations that reduce future flood damages. Participation in the NFIP is based on an agreement between communities and the Federal Government. If a community adopts and enforces a floodplain management ordinance to reduce future flood risk to new construction in floodplains, the Federal Government will make flood insurance available within the community as a financial protection against flood



losses. This insurance is designed to provide an insurance alternative to disaster assistance to reduce the escalating costs of repairing damage to buildings and their contents caused by floods. The Federal Insurance and Mitigation Administration (FIMA) within the Federal Emergency Management Agency (FEMA) is responsible for administering the National Flood Insurance Program (NFIP) and administering programs that provide assistance for mitigating future damages from natural hazards. (FEMA, 2002)

3. Executive Order 11988 – Floodplain Management

Executive Order 11988 requires federal agencies to avoid to the extent possible the long- and short-term adverse impacts associated with the occupancy and modification of flood plains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative. In accomplishing this objective, "each agency shall provide leadership and shall take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health, and welfare, and to restore and preserve the natural and beneficial values served by flood plains in carrying out its responsibilities" for the following actions:

- acquiring, managing, and disposing of federal lands and facilities;
- providing federally-undertaken, financed, or assisted construction and improvements; and
- conducting federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulation, and licensing activities. (FEMA, 2015)

3.F.2.2 STATE

A. Senate Bill 610 (SB 610) and Senate Bill 221 (SB 221)

In 2001, Governor Gray Davis signed into law State Law Senate Bills (SB) 221 and 610, which took effect January 1, 2002. These bills amended State laws to improve link information regarding water supply availability to certain land uses by cities and counties. SB 610 amended *Water Code* Sections 10910 to 10912 and 10915, and repealed Section 10913. SB 610 requires a detailed report regarding water availability and planning for additional water suppliers that is included with the environmental document for specific projects. All "projects" that meet any of the following criteria require assessment:

- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 5000,00 square feet (sf.) of floor space;
- A proposed commercial office building employing more than 1,000 persons or having more than 250,000 sf. of floor space;
- A proposed hotel or motel, or both, having more than 500 dwelling units;
- A mixed-use project that includes one or more of the projects specified in this subdivision; or
- 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.

SB 221 added *Government Code* Section 66473.7, which applies to the Subdivision Map Act. SB 221 conditions every tentative map for an applicable subdivision on the applicant by verifying that the public water supplier has "sufficient water supply" available to serve the Project. Under SB 221, approval by a city or county of certain residential subdivisions requires a written verification of sufficient water supply. SB 221 applies any "subdivision," as defined as:



- A proposed residential development of more than 500 dwelling units, if the public water supplier has more than 5,000 service connections; or
- Any proposed development that increases connections by 10% or more, if the public water supplier has fewer than 5,000 connections.

B. Porter-Cologne Water Quality Control Act

The Porter-Cologne Act is the principal law governing water quality regulation in California. It establishes a comprehensive program to protect water quality and the beneficial uses of water. The Porter-Cologne Act applies to surface waters, wetlands, and ground water and to both point and nonpoint sources of pollution. Pursuant to the Porter-Cologne Act (California Water Code § 13000 et seq.), the policy of the State is as follows:

- That the quality of all the waters of the State shall be protected;
- That all activities and factors affecting the quality of water shall be regulated to attain the highest water quality within reason; and
- That the State must be prepared to exercise its full power and jurisdiction to protect the quality of water in the State from degradation. (SWRCB, 2014)

The Porter-Cologne Act established nine RWQCBs (based on hydrogeologic barriers) and the State Water Resources Control Board (SWRCB), which are charged with implementing its provisions and which have primary responsibility for protecting water quality in California. The SWRCB provides program guidance and oversight, allocates funds, and reviews RWQCBs decisions. In addition, the SWRCB allocates rights to the use of surface water. The RWQCBs have primary responsibility for individual permitting, inspection, and enforcement actions within each of nine hydrologic regions. The SWRCB and RWQCBs have numerous non-point source (NPS) related responsibilities, including monitoring and assessment, planning, financial assistance, and management. (SWRCB, 2014)

The RWQCBs regulate discharges under the Porter-Cologne Act primarily through issuance of NPDES permits for point source discharges and waste discharge requirements (WDRs) for NPS discharges. Anyone discharging or proposing to discharge materials that could affect water quality (other than to a community sanitary sewer system regulated by an NPDES permit) must file a report of waste discharge. The Storm Water Resources Control Board (SWRCB) and the Regional Water Quality Control Boards (RWQCBs) can make their own investigations or may require dischargers to carry out water quality investigations and report on water quality issues. The Porter-Cologne Act provides several options for enforcing WDRs and other orders, including cease and desist orders, cleanup and abatement orders, administrative civil liability orders, civil court actions, and criminal prosecutions. (SWRCB, 2014)

The Porter-Cologne Act also implements many provisions of the Clean Water Act, such as the NPDES permitting program. The Porter-Cologne Act also requires adoption of water quality control plans that contain the guiding policies of water pollution management in California. In addition, regional water quality control plans (basin plans) have been adopted by each of the RWQCBs and get updated as necessary and practical. These plans identify the existing and potential beneficial uses of waters of the State and establish water quality objectives to protect these uses. The basin plans also contain implementation, surveillance, and monitoring



plans (SWRCB, 2014). The Project site is located in the Mojave River Watershed, which is within the purview of the SWRCB. The SWRCB's Basin Plan is the governing water quality plan for the region.

C. California Water Code

The California Water Code is the principal state law regulating water quality in California. Water quality provisions must be complied with as contained in numerous code sections including: 1) the Health and Safety Code for the protection of ground and surface waters from hazardous waste and other toxic substances; 2) the Fish and Game Code for the prevention of unauthorized diversions of any surface water and discharge of any substance that may be deleterious to fish, plant, animal, or bird life; 3) the Harbors and Navigation Code for the prevention of the unauthorized discharge of waste from vessels into surface waters; and 4) the Food and Agriculture Code for the protection of groundwater which may be used for drinking water supplies. The California Department of Fish and Wildlife (CDFW), through provisions of the Fish & Game Code (§§ 1601 - 1603) is empowered to issue agreements for any alteration of a river, stream, or lake where fish or wildlife resources may be adversely affected. CDFW regulates wetland areas only to the extent that those wetlands are part of a river, stream, or lake as defined by CDFW.

Surface water quality is the responsibility of the Regional Water Quality Control Board (RWQCB), water supply and wastewater treatment agencies, and city and county governments. The principal means of enforcement by the RWQCB is through the development, adoption, and issuance of water discharge permits. RWQCB basin plans establish water quality objectives that are defined as the limits or levels of water quality constituents or characteristics for the reasonable protection of beneficial uses of water.

D. California Toxics Rule (CTR)

The California Toxics Rule (CTR) fills gap in California's water quality standards necessary to protect human health and aquatic life beneficial uses. The CTR criteria are similar to those published in the National Recommended Water Quality Criteria. The CTR supplements, and does not change or supersede, the criteria that EPA promulgated for California waters in the National Toxics Rule (NTR). The human health NTR and CTR criteria that apply to drinking water sources (those water bodies designated in the Basin Plans as municipal and domestic supply) consider chemical exposure through consumption of both water and aquatic organisms (fish and shellfish) harvested from the water. For waters that are not drinking water sources (e.g., enclosed bays and estuaries), human health NTR and CTR criteria only consider the consumption of contaminated aquatic organisms. The CTR and NTR criteria, along with the beneficial use designations in the Basin Plans and the related implementation policies, are the directly applicable water quality standards for toxic priority pollutants in California waters. (SWRCB, 2016, pp. 14-15)

E. CDFG Code Section 1600 et seq. (Lake or Streambed Alteration Agreement Program)

Fish and Game Code Section 1602 requires an entity to notify CDFW prior to commencing any activity that may do one or more of the following:

- Substantially divert or obstruct the natural flow of any river, stream, or lake;
 - Substantially change or use any material from the bed, channel or bank of any river, stream, or lake;
- or



- Deposit debris, waste or other materials that could pass into any river, stream, or lake. (CDFW, n.d)

It should be noted that "any river, stream or lake" includes those that are episodic (they are dry for periods of time) as well as those that are perennial (they flow year-round). This includes ephemeral streams, desert washes, and watercourses with a subsurface flow. It may also apply to work undertaken within the flood plain of a body of water. (CDFW, n.d)

CDFW requires a Lake and Streambed Alteration (LSA) Agreement when it determines that the activity, as described in a complete LSA Notification, may substantially adversely affect existing fish or wildlife resources. An LSA Agreement includes measures necessary to protect existing fish and wildlife resources. CDFW may suggest ways to modify a project that would eliminate or reduce harmful impacts to fish and wildlife resources. Before issuing an LSA Agreement, CDFW must comply with CEQA. (CDFW, n.d)

F. Watershed Management Initiative (WMI)

The State and Santa Ana RWQCBs are currently focused on looking at entire watersheds when addressing water pollution. The Water Boards adopted the Watershed Management Initiative (WMI) to further their goals. The WMI establishes a broad framework overlying the numerous federal and State mandated priorities. As such, the WMI helps the Water Boards achieve water resource protection, enhancement and restoration while balancing economic and environmental impacts. (SWRCB, 2013) The integrated approach of the WMI involves three main ideas:

- Use water quality to identify and prioritize water resource problems within individual watersheds. Involve stakeholders to develop solutions.
- Better coordinate point source and nonpoint source regulatory efforts. Establish working relationships between staff from different programs.
- Better coordinate local, state, and federal activities and programs, especially those relating to regulations and funding, to assist local watershed groups. (SWRCB, 2013)

3.F.2.3 REGIONAL

A. San Bernardino County Stormwater Program

According to the Model Water Quality Management Plan Guidance document prepared for the San Bernardino County Stormwater Program, a Water Quality Management Plan (WQMP) must be developed, submitted, and implemented for development and redevelopment projects that either: 1) fall into the eight Permit-specified categories listed in Table 1-1 (Category Projects) of the Model WQMP guidance document, or 2) are not Category Projects but have a precise plan of development (e.g., all commercial or industrial Projects, residential Projects greater than 10 dwelling units, and all other land development Projects with potential for significant adverse water quality impacts) or subdivision of land (Non-Category Projects).

The Model WQMP Guidance document provides a framework to be followed by Project proponents for the preparation and implementation of a Project WQMP to minimize the adverse effects of development and redevelopment Projects on receiving waters during Project operations. These effects may be minimized through the implementation of site designs that reduce runoff and pollutant transport by minimizing impervious



surfaces and maximizing onsite infiltration, source-control BMPs, and/or either on-site structural treatment control BMPs, or participation in regional or watershed-based structural treatment control BMPs.

Private and public agency proponents of Projects that require WQMPs are responsible for developing WQMPs in accordance with local Agency requirements, submitting the WQMP to the local Agency for review and approval, implementing the WQMP until a change in ownership occurs, and transferring WQMP implementation responsibilities to the new owner.

B. San Bernardino County Development Code

Because the Project site is located within a Fire Safety Overlay, the proposed Project would be subject to the provisions of Section 82.13.080, Soil Erosion and Sediment Control Plan/Permits. This section requires the preparation and approval of a Soil Erosion and Sediment Control Plan to control erosion and sediment discharge into surface waters, as described below:

Section 82.13.080(2) Approval of Plan before issuance of permits, requires that a Soil Erosion and Sediment Control Plan be submitted and approved prior to the issuance of building permits, grading permits, soil erosion and sediment control permits, or any other permit where, in the opinion of the Building Official, erosion can reasonably be expected to occur.

Section 82.13.080(3) Plan contents, requires the following to be incorporated into a Soil Erosion and Sediment Control Plan:

- Include the applicable measures required by this Chapter and other measures or modifications of proposed measures required by the Building Official.
- Identify building and access construction envelopes and identify areas that will not be disturbed by construction activity in order to minimize disturbance of erodible areas of any proposed development site.
- Preserve existing streams and drainage courses in their natural condition in order to retain their ability to accommodate runoff and water drainage with a minimum of erosion.

Section 82.13.080(d) Runoff control measures, requires that runoff from activities subject to a development permit be properly controlled to prevent erosion. In addition, erosion control and surface flow contaminant facilities must be constructed and maintained to prevent discharge of sediment to surface waters or storm drain systems. Please refer to the Code section for a listing of specific measures to be used for erosion control to be implemented from a ten-year storm event.

Section 82.13.080(e) Land clearing measures, requires an approved Soil Erosion Sediment Control Plan/Permit before land clearing activities. This section also limits land clearing and vegetation removal and requires temporary and permanent vegetation of disturbed surfaces that is compatible with the area.



C. San Bernardino County General Plan

The County of San Bernardino General Plan, which was adopted in 2007, includes applicable goals and policies within the Circulation and Infrastructure Element and Conservation Element that address water quality, water supply, and erosion as discussed below.

1. Circulation and Infrastructure Element

The following goals and policies of the Circulation and Infrastructure Element address water supply, water quality, and related improvements and therefore are applicable to the proposed Project:

CI 11.12 Prior to approval of new development, ensure that adequate and reliable water supplies and conveyance systems will be available to support the development, consistent with coordination between land use planning and water system planning.

CI 13.1 Utilize site-design, source-control, and treatment control best management practices (BMPs) on applicable Projects, to achieve compliance with County Municipal Stormwater NPDES Permit.

Additional transportation policies within the Mountain Region to address water supply, water quality, and related improvements are also applicable to the proposed Project:

M/CI 4 Ensure the infrastructure improvements are compatible with the natural environment of the region.

M/CI 4.1 Retain the natural drainage bottom for all storm water drainage facilities and flood control channels when such facilities are required for specific development. This protects wildlife corridors and prevents loss of critical habitat in the region.

2. Conservation Element

Within the Conservation Element the following drainage and water conservation policies are applicable to the proposed Project:

CO 5.4 Drainage courses will be kept in their natural condition to the greatest extent feasible to retain habitat, allow some recharge of groundwater basins and resultant savings. The feasibility of retaining features of existing drainage courses will be determined by evaluating the engineering feasibility and overall costs of the improvements to the drainage courses balanced with the extent of the retention of existing habitat and recharge potential.

Policies from the Conservation Element pertaining to the Mountain Region that are applicable to the Project include the following:

M/CO 2.8 When feasible, require developers through the development review process to substantially maintain existing percolation and surface water runoff on site.



M/CO 3.2 Require naturalistic drainage improvements where modifications to the natural streamway are required.

M/CO 3.9 Support and apply water conservation and reuse measures through the development review process.

3. Safety Element

The following erosion policies are applicable to development of the proposed Project:

S 4.2 Apply the provisions of the Revised Erosion and Sediment Control Ordinance countywide.

S 4.3 Tailor grading, land clearance, and grazing to prevent unnatural erosion in erosion susceptible areas.

S 4.5 Restrict use of off-road vehicles in areas susceptible to erosion.

D. San Bernardino County – Standard Conditions of Approval

The County of San Bernardino Land Use Services Department Current Planning Division, as part of its review process, requires the applicant to implement applicable “standard conditions of approval” as part of the Project design features in order to reduce the Project’s contribution towards greenhouse gas emissions (GHGs). Some of the standard conditions of approval are applicable to water conservation and will be implemented as part of the Project. The applicable standard conditions of approval include, but are not limited to, the following:

- The Developer shall document that the design of the proposed buildings or structures exceeds by a minimum of 5% the current Title 24 requirements. County Planning shall coordinate this review with the County Building and Safety. The following design features related to water conservation may be implemented in combination with other design features⁴ (non-water conservation related) to fulfill this mitigation provided that the total increase in efficiency meets or exceeds the Title 24 minimum plus 5% cumulative goal for the entire Project (Title 24, Part 6 of the California Code of Regulations; Energy Efficiency Standards for Residential and Non Residential Buildings, as amended June 2015; Cool Roof Coatings performance standards as amended April 26, 2006):
 - Incorporate energy efficient appliances;
 - Incorporate energy efficient domestic hot water systems; and
 - Incorporate other measures that will increase energy efficiency.
- The developer shall submit a landscape plan for the Project that includes shade trees around main buildings, particularly along southern and western elevations where practical and in a manner that will not interfere with loading locations or other operational constraints. These plans shall also include

⁴ Please refer to Section 3.J, Global Climate Change, for a listing of all GHG-reducing mitigation measures and other requirements that would be implemented by the project to meet or exceed the Title 24 minimum efficiency requirements plus 10% cumulative goal for the entire project.



drought tolerant and smog tolerant trees, shrubs, and groundcover to ensure the long-term viability and conserve water and energy.

- The developer shall submit irrigation plans that are designed, so that all common area irrigation areas shall be capable of being operated by a computerized irrigation system which includes either an onsite weather station, ET gauge or ET based controller capable of reading current weather data and making automatic adjustments to independent run times for each irrigation valve based on changes in temperature, solar radiation, relative humidity, rain and wind. In addition, the computerized irrigation system shall be equipped with flow sensing capabilities, thus automatically shutting down the irrigation system in the event of a mainline break or broken head. These features will assist in conserving water, eliminating the potential of slope failure due to mainline breaks and eliminating over-watering and flooding due to pipe and/or head breaks.
- All showerheads, lavatory faucets, and sink faucets shall comply with the California Energy Conservation flow rate standards, as confirmed by County Building & Safety.
- Low flush toilets shall be installed where applicable as specified in *Health and Safety Code* Section 17921.3, as confirmed by County Building & Safety.
- The developer shall submit to County Planning for review and approval landscape and irrigation plans that are designed to include drought tolerant and smog tolerant trees, shrubs, and groundcover to ensure the long-term viability and conserve water and energy.

3.F.2.4 LOCAL

A. Lake Arrowhead Community Plan

The LACP includes goals and policies related to water supply, drainage, and water quality within the Circulation and Infrastructure and Conservation Elements, which are applicable to the proposed Project. These goals and policies are refinements to those contained in the General Plan and are specific to the Lake Arrowhead community.

1. *Circulation and Infrastructure*

The following goals and policies of the Circulation Element of the LACP pertain to water supply and water resources:

- LA/CI 5** Ensure adequate water sources and associated infrastructure to serve the needs of existing and future water users in the Lake Arrowhead Community Plan area.
- LA/CI 5.1** Through the development review process, permit new development only when adequate water supply exists or can be assured.
- LA/CI 5.5** Ensure that the required infrastructure is in place prior to the occupancy of any new development Project.



LA/CI 6 Encourage and promote water conservation.

LA/CI 6.3 Recommend the use of native low water use vegetation, especially drought tolerant plants in landscaping and discourage inappropriate use of vegetation unsuited to the mountain climate.

LA/CI 6.5 Promote use of water efficient irrigation practices for all landscaped areas.

LA/CI 6.6 Regulate the extent and amount of impervious surface coverage.

2. Conservation

The following goals and policies of the Conservation Element of the LACP are relevant to drainage and water quality:

LA/CO 3 Protect streambeds and creeks from encroachment or development that detracts from their beauty.

LA/CO 3.1 Utilize open space and drainage easements as well as clustering of new development as stream preservation tools.

LA/CO 3.2 Require naturalistic drainage improvements where modifications to the natural streamway are required.

LA/CO 3.3 Prohibit exposed concrete drainage structures. Acceptable designs include combinations of earthen landscaped swales, rock rip-rap lined channels or rock-lined concrete channels. Property owners must provide for the maintenance of underground drainage structures.

LA/CO 4 Enhance and maintain the quality of water from Lake Arrowhead and Grass Valley Lake, their tributaries and underground water supplies.

LA/CO 4.2 Enforce grading and landscaping standards to reduce soil erosion.

LA/CO 4.3 Ensure that the County Building Code incorporates appropriate construction activity control measures.

B. Crestline-Lake Arrowhead Water Agency – Urban Water Management Plan

The Crestline-Lake Arrowhead Water Agency's 2010 Urban Water Management Plan (UWMP) (adopted July 2011), as required by the Urban Water Management Planning Act (*Water Code* Division 6, Part 2.6), addresses CLAWA's long-term water needs and management. Section 5 and Appendix E of the UWMP sets forth a water shortage contingency plan that may be implemented by CLAWA's board during water shortages (CLAWA, 2011). These include the following:

- Stages 1 through 5 Emergencies: Percentage reductions in the customer's prior monthly use.
- Stages 2 through 5 Emergencies: Surcharges established by the Board on consumption in excess of the allowable quantity.



- The emergency water allocation schedule is as follows:

Allocation Method for Retail and Wholesale Customers	
State of Emergency Declared by the Board	Percentage of Water Delivered During Corresponding Month of Base Year
Stage 1 Emergency	95 %
Stage 2 Emergency	90 %
Stage 3 Emergency	80 %
Stage 4 Emergency	70 %
Stage 5 Emergency	60 %

At the time this DREIR was prepared, a Stage 1 Emergency was declared and therefore mandatory conservation measures pursuant to *Water Code* Section 10631(e)(4) and codified in County Ordinances 44 and 45,⁵ prohibit the following:

- Running water into streets or gutters;
- Washing automobiles or equipment with running water (as opposed to using a bucket or commercial establishment using recycled or reclaimed water);
- Washing down buildings (except windows), walks, driveways, or streets;
- Sprinkling for dust control;
- Water displays for ornamental water use (e.g., fountains), except when display uses reclaimed or recycled water;
- Dripping faucets, or other leaks, or unattended or excessively running hoses;
- Watering lawns, parks, playgrounds or ballfields more than twice per week, which watering must occur after 9:00 P.M. and before 3:00 A.M.; providing there shall be no prohibition against watering with reclaimed water.

3.F.3 THRESHOLDS OF SIGNIFICANCE

Appendix G of the State CEQA Guidelines provides thresholds for determining significant environmental impacts. A project may be deemed to have a significant impact on hydrology, water quality, and water supply if the Project would:

- Violate any water quality standards or waste discharge requirements*
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)*

⁵ Ordinance No. 44, *Declaring an Emergency Water Shortage and Establishing a Water Conservation Program*, adopted February 14, 1991 and Ordinance No. 45, *adopted April 4, 1991*.



- c. *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site*
- d. *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site*
- e. *Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff*
- f. *Otherwise substantially degrade water quality*
- g. *Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map*
- h. *Place within a 100-year flood hazard area structures which would impede or redirect flood flows*
- i. *Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam*
- j. *Inundation by seiche, tsunami, or mudflow*

3.F.4 ENVIRONMENTAL IMPACTS

3.F.4.1 METHODOLOGY

A. Hydrology and Drainage

According to the Drainage Study (revised April 2018) prepared for the Project (DREIR *Technical Appendix F*), the existing conditions and post-development hydrology calculations for the Project have been developed utilizing a rational analysis that was performed pursuant to the “San Bernardino County Rational Hydrology Program (Hydrology Manual date – August 1986) Civilcadd/Civildesign Engineering Soft Water (C) 1989-2005 Version 7.1.” The Rational Method is an empirical computation procedure used for developing a peak runoff rate (discharge) for storms of a specific recurrence level. A field review of the existing drainage and road improvements within the contributing drainage area was conducted to determine, as accurately as possible, the flow paths within the sub-areas. To determine the extent of hydrology impacts as a result of rain or snowfall, the analysis compares the post-development expected hydrologic runoff quantities from on and offsite sources with existing site conditions. Then, the size of facilities necessary to collect and convey storms during a storm of 100-year intensity was determined. Although these calculations were performed in 2005, the Project site’s topography and drainage pattern has not substantially changed since then; therefore, the study and data are still applicable.

B. Water Supply

Based on the average water demand that would be used by the proposed Project, an analysis is conducted to determine whether water supply is available by Crestline-Lake Arrowhead Water (CLAWA) to serve the Project. CLAWA has provided a “will-serve” letter to the Project, dated April 28, 2017 stating it has water available to meet the future demand of the Project. (CLAWA, 2017)



C. Water Quality

Existing storm water quality is qualitatively discussed, as there is no measured data on storm water quality for the Project site. For purposes of the surface water quality analysis, impacts are assessed by evaluating the types of pollutants and/or effects on water quality likely to be associated with construction and operation of the Project, and how and where they would be conveyed. With this basis, the potential for Project generated pollutants to impact sensitive receiving waters is assessed. Where potential impacts are identified, relevant Project design features and/or BMPs identified in Appendix I of the Drainage Study (revised April 2018) (DREIR *Technical Appendix F*) prepared for the Project and regulatory permits/requirements are considered.

3.F.5 PROJECT FEATURES

Under existing conditions, offsite flows enter the Project site at the southwest corner of the Project site, north of SR-18. Flows entering the site from the southwest corner would be intercepted by the Project's proposed 60-inch storm drain pipe. The pipe would consist of a 60-inch reinforced concrete pipe (RCP) and would be approximately 750 feet in length. This pipe is proposed to continue through the fill area located in the southwest corner. The proposed 60-inch storm drain would be adequate to convey flows generated by a 100-year storm event. The San Bernardino County Flood Control District has planned to develop their Rimforest Storm Drain project to be built on approximately 10 areas immediately north and northwest of the Project site. The Rimforest Storm Drain project would install a 72-inch storm drain to be built in place of the proposed Project's 60-inch storm drain. The Rimforest Storm Drain project proposes to divert more water through their storm drain that what currently drains to the area. The proposed Project's 60-inch pipe and the Rimforest Storm Drain project's 72-inch pipe would be the same storm drain. It is anticipated that the Rimforest Storm Drain project would be constructed prior to the implementation of the proposed Project and, as such, the storm drain located in the Project site's southwest corner would be constructed as a 72-inch storm drain. Moreover, coordination between the proposed Project and the Rimforest Storm Drain project concluded that the storm drain would be constructed as a 72-inch storm drain.

The proposed Project's storm drain improvements also include energy dissipaters at the outlet for of the Project's proposed 60-inch RCP and the concrete lined channel; depressed landscaped areas (infiltration basins) to facilitate infiltration and mitigate runoff; and storm drain filters.

Approximately 6.8 acres of the site would include landscaping associated with the manufactured slope areas, an athletic field, and other ornamental landscaping. Landscaped areas would incorporate native, drought-tolerant vegetation and, where applicable, utilize a computerized irrigation system to increase water efficiency of the irrigation system to ensure that no nuisance water exits the Project site.



3.F.6 IMPACT ANALYSIS

Threshold a) Violate any water quality standards or waste discharge requirements?

Threshold f) Otherwise substantially degrade water quality?

1. Construction

Development of the Project would involve the construction of approximately 6.4 acres of impervious areas, including buildings, parking lots, sidewalks and paved assembly areas. Approximately 6.8 acres would consist of landscaped areas, sodded recreation areas and landscaped slopes. Approximately 13.4 acres would be retained as natural open space. As construction activities would occur over more than one acre, the Project would require the submittal and approval of a SWPPP to address erosion control and water quality measures during and after construction in order to obtain a NPDES construction general permit. This permit process requires implementation and monitoring of BMPs to support elimination or reduction of pollutants to levels that comply with applicable water quality standards and do not cause environmental harm. A Soil Erosion and Sediment Control Plan would also be required prior to the issuance of a grading permit. Thus, construction-related impacts to water quality standards or waste discharge requirements would be less than significant.

Construction controls are temporary and specific to the type of construction. Construction controls typically address issues regarding exposed soils and the potential for erosion. Grading, excavation and construction activities associated with the proposed Project could impact water quality due to sheet erosion of exposed soils and subsequent deposition of particles and pollutants in drainage areas. Construction of the proposed Project has the potential to produce typical pollutants such as nutrients, heavy metals, toxic chemicals related to construction and cleaning, waste materials including wash water, paints, wood, paper, concrete, food containers, and sanitary wastes, fuel, and lubricants. Thus, increased pollutant loading could occur on the site and be transported off the site as a result of construction activities.

As the proposed Project would disturb one (1) or more acres of soil, the applicant would be required to comply with the requirements set forth in the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit, Permit Order 99-08-DWQ). Construction activity subject to this permit includes clearing, grading and disturbances to the ground such as stockpiling, or excavation.

The Construction General Permit requires the development and implementation of a SWPPP. The applicant would prepare and submit a Notice of Intent (NOI) to comply with the Construction General Permit to the California State Water Resources Board. The SWPPP must list BMPs the discharger will use to protect storm water runoff and the placement of those BMPs. As part of these requirements, BMPs would be implemented that would serve to minimize sedimentation, reduce or eliminate other pollutants in storm water runoff, and reduce or eliminate non-storm water discharges. The implementation of traditional engineering erosion control methods and BMPs (e.g., proper grading techniques, appropriate sloping of the construction site, sand bagging, drainage swales, regular watering of disturbed areas), which constitute standard conditions of grading permit approval, would effectively control fugitive dust and sediment transport during construction operations, including the discharge of sediment into the area's storm drain system.



As stated in the Environmental Setting section, the groundwater at the site is anticipated to consist of insignificant amounts of perched water and limited amounts of water within the fractures of the bedrock. Thus, construction activities, including grading, are not anticipated to encounter significant amounts of groundwater. Nonetheless, since the Project would comply with regulatory requirements, including the Construction General Permit that requires implementation of BMPs identified in a SWPPP, surface water that may percolate into the soil would not adversely affect groundwater on- or off-site.

In summary, construction activities associated with the proposed Project would have a short-term impact on water quality impacts, however, this impact would be less than significant due to compliance with regulatory requirements, including the Construction General Permit that requires implementation of BMPs identified in a SWPPP would reduce short-term construction impacts to water quality to a less than significant level.

2. Operational Conditions

On May 2, 2011, W.J. McKeever, Inc. prepared a Project-site specific WQMP in accordance with the San Bernardino County's WQMP for Urban Runoff. According to the site-specific WQMP, the anticipated pollutants of concern generated by the Project site's post-development conditions include bacteria/virus, heavy metals, nutrients, pesticides, organic compounds, sediments, trash and debris, oxygen demanding substances, and oil and grease.

The Project's WQMP (See Appendix I of *Technical Appendix F*) identifies operational structural and non-structural BMP's that would be incorporated into the Project's operation and maintenance. The WQMP's structural BMPs consists of depressed landscape areas (i.e. athletic field, parking areas, assembly area) and storm drain filters. The Project proposes to construct a bioretention basin in the central portion of the Project site, north of the southern parking area. Additionally, fossil filters would be installed in the storm drain inlet to the 60-inch reinforced concrete pipe. Initial "first flush" flows from most of the parking and driveways areas would be directed to "grassy swales" within the landscaped areas within the parking areas, assembly buildings, and manufactured slopes. The WQMP's non-structural BMPs include the education of property owners, employee training, street sweeping, landscaping maintenance, irrigation maintenance, filter inspection, litter control, and catch basin inspection. The WQMP is based on the San Bernardino County WQMP Guidelines and NPDES permits that took effect as of January 2004. Compliance with the NPDES permit, WQMP standards would reduce long-term operational surface water quality impacts to a less than significant level.

Threshold b) *Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production of rate or pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted?)*

The Project does not propose the direct use or extraction of groundwater. No wells are proposed. The groundwater at the site consists of small amounts of perched water and limited amounts of water within the fractures of the bedrock. Accordingly, the potential for the Project to substantially deplete groundwater supplies through the means of groundwater extraction or increasing direct consumption of potable groundwater is less-than-significant.



Approximately 25% of the entire Project site would consist of impervious surfaces. The developed portion of the Project site would consist of 50% permeable and 50% impervious surfaces, which may affect the ability for groundwater recharge to occur at the Project. Initial “first flush” flows would be directed to grassy swales within the landscaped areas. The landscaped areas and athletic field would act as infiltration beds to mitigate the increased runoff due to the impervious areas. As such, no drainage outlets would be needed for these areas. These landscaped areas would facilitate the process of groundwater recharge similar to the existing conditions before the remaining flows are conveyed to the natural drainage system that occurs within the center of the Project site. Furthermore, the hard, non-porous nature of the underlying bedrock at the Project site tends to abate groundwater flows, with the exception of limited amounts of water perched over the bedrock or found within the fractures of the bedrock. The Project would not substantially interfere with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table. Impacts would be less-than-significant.

- Threshold c)** *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site?*
- Threshold d)** *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?*
- Threshold e)** *Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?*

Similar to existing conditions, off-site drainage flows during operation of the Project would continue to enter the site at the north and northwestern portions of the Project site. As the proposed Project would result in a fill of the natural drainage course in the southwest corner of the site, a new 60-inch reinforced concrete storm drain pipe would be installed at the southwest corner of the site to intercept off-site flows. The new 750-foot long storm drain pipe would extend through the proposed development area and would generally parallel the proposed sewer alignment. Approximately midway through the Project site, the proposed storm drain would discharge into the existing natural drainage area and flow northeasterly through the Project site. The Project design includes energy dissipaters at the outlet of the 60-inch storm drain pipe to prevent erosion and maintain flow velocities that are similar to existing conditions. The flows entering the site at Flow Entrance B on the north boundary line would be left in their natural condition and discharge into the natural drainage course within the Project site. The San Bernardino County Flood Control District also plans to implement the proposed Rimforest Storm Drain Project on 10 acres located north and northwest of the Project site. The proposed Rimforest Flood Control project proposes a 72-inch storm drain to be built in place of the proposed Project’s 60-inch pipe. The Flood Control’s project proposes to divert more water through this storm drain than under existing conditions. The proposed Project’s 60-inch pipe and the proposed Rimforest Flood project’s 72-inch pipe would comprise the same storm drain. It is anticipated that the Rimforest Flood project would be constructed prior to the implementation of the proposed Project and the proposed storm drain would be constructed as a 72-inch storm drain. Additionally, coordination between the proposed Project and Rimforest Storm Drain project concluded that, in all likelihood, the proposed Project’s storm drain would be constructed as a 72-inch storm drain.



Currently, the area of the Project site proposed for development consists of steep mountainous slopes. Based on data provided in the Drainage Study (DREIR *Technical Appendix F*), the Q value for the developed conditions would decrease to 67.64 cfs from 68.18 cfs as compared to undeveloped conditions, which represents a 0.54 cfs reduction in the peak stormwater flows that would be discharged from the Project site when compared to the existing condition. Grading of the site would create flatter areas (i.e., athletic field, landscaped areas) where the steep slopes previously existed and would cause the “time of concentration” of stormwater flows to decrease such that the effects of incorporating impervious surfaces would be outweighed. However, the total area that encompasses the off-site and on-site drainage areas would result in a slight increase to 551.39 cfs from 550.15 cfs as compared to the undeveloped conditions, which represents a 1.24 cfs increase within the total drainage area. The difference in flow would be caused by the modification to the drainage area topography of the Project site. The developed area would increase the Project area’s flow rates due to flattening the slopes at the top of the Project site. The decreased flow from the on-site drainage study included in the Project’s Drainage Study illustrate that Project development would not substantially increase the Q value for the portion of the drainage area that occurs within the Project site whereas the slight increase to the overall stormwater flows within the drainage area would represent a nominal increase (0.002%) when compared to the existing condition. (W.J. McKeever, 2018). Therefore, impacts associated storm water runoff due to the development of the Project would be less-than-significant.

Onsite flows would be discharged to the same drainage course (as modified by the Rimforest Storm Drain Project) as under existing conditions and the overall drainage area topography would not be substantially altered by development of the Project. Therefore, because the drainage pattern of the site or area would not be substantially altered, the Project would not substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site. In addition, because the Project would implement short- and long-term water quality controls (i.e., BMPs and a Soil Erosion and Sediment Control Plan) consistent with applicable regulatory requirements, the Project would not result in substantial erosion/siltation on- or off-site during both construction and operation. Thus, less-than-significant impacts regarding hydrology and drainage would occur.

Threshold g)	<i>Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?</i>
Threshold h)	<i>Place within a 100-year flood hazard area structures which would impede or redirect flood flows?</i>

The Project is not a proposed commercial or residential development but would include one structure to accommodate the on-site caretaker. According to FEMA Flood Insurance Rate Map (FIRM) No. 06071C7955H (dated August 28, 2008), the Project site is not located within a special flood hazard zone area that is subject to inundation by a 1% annual flood (100-year flood) (FEMA, 2008). As such, the Project would not place housing within a 100-year flood hazard area; therefore, no impact would occur.

The Project site is not located within a special flood hazard area; therefore, the Project does not have the potential to place structures within a 100-year flood hazard area. Additionally, a storm water drainage system would be installed on the Project site that would infiltrate storm water into the ground water basin and convey excess storm water to the natural drainage system located on-site in a manner as occurs under existing conditions. The proposed storm water drainage system would sufficiently capture and convey storm water



flows originated on-site during 100-year flood events such that no substantial on-site off-site flooding would occur. Accordingly, with the implementation of the proposed storm water drainage system, the Project would not impede or redirect the flows within a 100-year flood hazard area; therefore, no impact would occur.

Threshold i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?

As discussed above, the Project site is not located within a special flood hazard area subject to inundation by a 1% annual flood (100-year flood) nor is the Project site within an area subject to the protection of levees (FEMA, 2008). The nearest dam to the Project site is the Bear Valley Dam located approximately 13.8 miles east (Google Earth Pro, 2018). The County of San Bernardino General Plan Hazards Overlay Map does not identify any portions of the Project site that are subject to inundation due to failure of dams⁶. As such, the Project site does not have the potential to be impacted by flooding as a result of a levee or dam failure. Additionally, the Project would have no potential to cause the failure of a dam or levee because no dams or levees would be directly or indirectly impacted by the Project. Furthermore, the Project's storm water flows would either infiltrate into the groundwater basin or would be directed into the on-site natural drainage feature. As such, the Project would have a less-than-significant impact with respect to exposing people or structures to significant risks involving flooding associated with a dam or levee.

Threshold j) Inundation by seiche, tsunami, or mudflow?

The Project does not propose the construction of any large bodies of water that could be affected by a seiche. The Project also would not have direct physical effects on existing enclosed water bodies because the Project site is not located immediately proximate to any large water bodies, including reservoirs that could result in potential indirect impacts associated with a seiche. The nearest enclosed water body is Lake Arrowhead located approximately 2.0 miles northeast of the Project site and seiches do not have the potential to extend a 2.0-mile distance; therefore, substantial impacts due to seiches could not occur on the Project site (Google Earth Pro, 2018). Additionally, there is no potential for a seiche to occur in the proposed on-site infiltration detention basins due to limited depth and size of the proposed detention basin. The Project has no potential to be exposed to inundation due to seiche.

The Project site is located more than 50 miles northeast of the Pacific Ocean and is approximately 5,680 feet amsl; therefore, the potential for a tsunami to affect the Project site is non-existent. As such, the Project would not be affected by inundation due to a tsunami. (Google Earth Pro, 2018)

In 2001 LOR Geotechnical Group (LOR) conducted a site-specific geotechnical investigation and indicated that the Project site and the Rimforest area, predominantly areas west of the Project site, may be underlain by a large, deep-seated ancient landslide complex. The investigation states that no strong evidence was found for the existence of the landslide as far east as the Project site and that if the postulated landslide were present, it is considered to be stable. However, due to the unstable nature of the materials associated with smaller

⁶ County of San Bernardino, General Plan Hazards Overlay Map, March 9, 2010. Available at: http://www.sbcounty.gov/Uploads/lus/HazMaps/FH23B_20100309.pdf



landslide area, impacts from grading or development within landslide areas are considered potentially significant absent mitigation. As stated in Subsection 3.D, *Geology and Soils*, the implementation of Mitigation Measures MM 3.D-1 and MM 3.D-2 would include excavation and design criteria to stabilize or remove the small landslide area in the southwest portion of the Project site. Additionally, the Project's storm water drainage system would allow for storm water collected to either infiltrate into the ground water basin or flow into the storm water drainage system. The drainage system is designed to handle the projected storm water volumes and does not have the potential to cause mudflows. As such, impacts related to mudflows and landslides would be less-than-significant with incorporation of mitigation.

3.F.6.1 WATER SUPPLY ANALYSIS

As stated under the Regulatory Framework discussion above, adequacy of water supplies for a development project must be determined per the requirements of Senate Bills 221 and 610. SB 610 requires that a detailed report regarding water availability and planning for additional water supplies be prepared if a Project meets or exceeds certain development thresholds, which include the following:

- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet (sf.) of floor space;
- A proposed commercial office building employing more than 1,000 persons or having more than 250,000 sf. of floor space;
- A proposed hotel or motel, or both, having more than 500 dwelling units;
- A mixed-use project that includes one or more of the projects specified in this subdivision; or
- 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.

The proposed Project does not meet or exceed any of the threshold criteria because the Project does not propose any of the aforementioned uses and does not contain 250,000 or more square feet of floor space, thus, the requirements of SB 610 do not apply to the Project.

SB 221 conditions every tentative map for an applicable subdivision on the applicant by verifying that the public water supplier has "sufficient water supply" available to serve it. SB 221 applies to any "subdivision" that consists of a residential development of more than 500 dwelling units, if the public water supplier has more than 5,000 service connections or any proposed development that increases connections by 10% or more, if the public water supplier has fewer than 5,000 connections. The Project does not meet or exceed any of the threshold criteria, nor would the Project increase demand by more than 10% of CLAWA's current or estimated long-range supply. Thus, the requirements of SB 221 do not apply to the Project.

Although a water supply assessment pursuant to SB 610 or SB 221 is not required, a water demand analysis has been prepared for the Project by W.J. McKeever Inc. (McKeever) to estimate the amount of water that would be consumed by the Project during operation.⁷ According to the McKeever analysis, interior uses associated with the Project are estimated to require a maximum domestic water flow of approximately 125

⁷ Water Service Requirements analysis prepared by W.J. McKeever Inc., July 18, 2006.



gallons per minute (gpm) and an annual water demand of approximately 49 AF per year. Of the total 49 AF per year demand associated with interior uses, Phase I is anticipated to require approximately 18 AF per year. Phase II would add approximately 22 AF per year.

Based on the approximately 14 acres requiring landscape irrigation water, the proposed Project would require a maximum flow of 125 gpm and a total demand of approximately 35 AF per year from the CLAWA. Of the total demand for the irrigated uses, the Project's sports field is estimated to require a maximum of approximately 11 AF per year, and the landscaped slope areas are estimated to require approximately 10 AF per year. The combined total of interior and landscaped uses would be approximately 86 AF.

As stated in the Environmental Setting section, CLAWA's has established long-term water supply Projections, set forth in the 2010 UWMP. Long-term Projections up to 2035 are based on the historical reliability of the SWP during record dry years, and demonstrate that under a multiple-dry-year scenario, CLAWA would have a reliable water supply up to 2035. The increase of 86 AF anticipated by the Project would not exceed the estimated increase under the UWMP Projected water demand. In addition, CLAWA has indicated that it has the capacity to meet the Project's water demand.⁸ As the proposed Project would not require CLAWA to seek additional water entitlements, it would have a have a less than significant impact with respect to water demand.

The Project would incorporate water conservation measures that are not reflected in the Project's calculated water demand. For instance, the Project would be required to meet the applicable water conservation measures enforced as part of San Bernardino Standard Conditions of Approval during the development review process. Standard conditions include drought tolerant vegetation and computerized irrigation systems with automatic, independent adjustments for changes in temperature, solar radiation, humidity, rain and wind. In addition, the computerized irrigation system would be equipped with flow sensing capabilities which shut down the system in the event of break or leak. The Project would also be required install low-flow interior water faucets and toilets. The implementation of water conservation measures would incrementally reduce the Project's annual water use.

The Project would meet fire flow standards, in accordance with SBCFD requirements. Under SBCFD requirements, water system improvement plans must be designed and submitted to SBCFD for review, prior to land disturbance. Based on SBCFD standards, the Project's 46,309-square foot structure would require a fire flow of 3,750 gpm for a 3-hour duration, with a residual operating pressure of 20 pounds per square inch (psi) (see Section 3.E, Hazards). The Project would install six-inch or larger circulating (loop) water mains as required by the Uniform Fire Code. In addition, the Project would provide hydrants according to CFFPD-approved hydrant location and spacing, and would provide sufficient water storage, as required, to meet the Fire Authority's minimum fire flow duration requirements. Therefore, with respect to required water systems and infrastructure, the Project would not require changes in CLAWA's current delivery system or in CLAWA's forecasted water availability and as a result Project impacts would be less than significant.

⁸ Crestline-Lake Arrowhead Water Agency, *Water Availability Letter to Church of the Woods.*, April 28, 2017.



3.F.7 CUMULATIVE IMPACTS

The Project would not result in increased offsite flows that would cumulatively contribute to potential erosion hazards associated with altered drainage patterns. The construction and operation of the Project would comply with all applicable federal, state and local water regulations, including NPDES permit requirements and RWQCB regulations, which would avoid significant impacts to hydrology and surface water quality. Future Projects in the Project area would also be subject to these same requirements and evaluated individually to determine appropriate measures to avoid impacts to hydrology and surface water quality.

The CLAWA UWMP estimated that future supply and storage would be adequate to satisfy increased future demand in CLAWA's service area. Nonetheless the water demand created by the identified cumulative Projects in addition to the proposed Project would be within the anticipated supply to be provided by CLAWA. Related Projects would be subject to applicable emergency water conservation measures, including reduced allocation and surcharges, in the event of future water shortages. In addition, related Projects would be subject to standard development conditions that require strict water conservation design features. Individual Projects would also be evaluated pursuant to SB 610 and SB 221, where applicable, and by the appropriate public water supplier to ensure that new development can be adequately served by existing and forecasted water supplies. In summary, cumulative impacts to hydrology, surface water quality, and water supply and storage would be less than significant.

3.F.8 SIGNIFICANCE BEFORE MITIGATION

Threshold b: Less-than-Significant Impact. The Project does not propose the use of groundwater. The groundwater at the site is anticipated to consist of insignificant amounts of perched water and limited amounts of water within the fractures of the bedrock. The potential for the Project to substantially deplete groundwater supplies through the means of groundwater extraction or increasing consumption of potable groundwater is less-than-significant.

Threshold c, d, and e: Less-than-Significant Impact. The Project would result in a nominal increase in the overall drainage area's Q value. However, the Project would not increase the Project site's Q value and Project-specific impacts would be less-than-significant. During Project operation, the Project would not substantially increase the rate or amount of surface runoff originating from the Project site. On-site flows would be discharged in a similar manner as compared to existing conditions and at a similar rate. Therefore, impacts would be less-than-significant.

Threshold a and f: Less-than-Significant Impact. Construction activities associated with the proposed Project would have a short-term impact on water quality impacts, however, this impact would be less than significant due to compliance with regulatory requirements, including the Construction General Permit that requires implementation of BMPs identified in a SWPPP would reduce short-term construction impacts to water quality to a less-than-significant level. The Project's WQMP identifies operational structural and non-structural BMP's that would be incorporated into the Project's operation and maintenance. Compliance with the NPDES permit, and WQMP standards would ensure that long-term operational surface water quality impacts would be less than significant.



Threshold g and h: Less-than-Significant Impact. The Project site is not located within a special flood hazard zone area that is subject to inundation by a 1% annual flood (100-year flood). The Project would not place housing or structures in a 100-year flood hazard area or impede or redirect flood flows within a 100-year flood hazard area. Impacts are considered less-than-significant.

Threshold i: Less-than-Significant Impact. the Project site is not located within a special flood hazard area nor is the Project site within an area subject to the protection of levees. The County of San Bernardino General Plan Hazards Overlay Map does not identify any portions of the Project site that are subject to inundation due to failure of dams. The Project would not expose people or structures to significant risk or loss, injury, or death involving flooding including flooding as a result of a dam or levee failure. Impacts are considered less-than-significant.

Threshold j: Potentially Significant Impact. Due to the unstable nature of materials associated with small on-site landslide areas, impacts from Project-related grading or development within the landslide areas are considered potentially significant for landslide impacts absent mitigation. Impacts are considered potentially significant.



3.F.9 MITIGATION MEASURES

3.F.9.1 APPLICABLE COUNTY REGULATIONS AND DEVELOPMENT REQUIREMENTS

The following are applicable regulations and design requirements that will be imposed on the Project by San Bernardino County pursuant to the County's Development Code. Although, these requirements technically do not meet CEQA's definition for mitigation because they are regulatory requirements, they are specific herein to document required Project compliance with applicable County regulations.

- The Project is required to comply with San Bernardino County Stormwater Program requirements.
- The Project is required to comply with Soil Erosion and Sediment Control Plan requirements specified in San Bernardino County Development Code Section 82.13.080.

3.F.9.2 MITIGATION MEASURES

MM 3.D-1 Prior to issuance of any grading permit, the San Bernardino County Building Official or their designee shall confirm that the Grading Plan incorporates specific measures from the required design-level geotechnical investigation which shall, at a minimum, address landslides, liquefaction, lateral spreading, and collapsible soils. The geotechnical investigation report and the measures that shall be included as notes on the Grading Plan and shall comport with the provisions established in Chapter 87.08, *Soils Reports*, and Chapter 88.02, *Soil and Water Conservation*, of the San Bernardino County Code. Remedial measures to address landslides may include, but not be limited to: removal, repositioning, embedment, anchoring of boulders; installation of catchment fences; and construction in accordance with the recommendations of the Project geotechnical engineer, CALGreen and any County guidelines. Potential remedial measures that may be required to address collapsible soils may include, but not be limited to, over-excavation of all uncontrolled artificial fill and upper portion of the surficial soils during site grading. Remedial measures to address liquefaction may include, but not be limited to, specialized compaction techniques and cement or chemical grouting. Prior to issuance of any grading permit, the San Bernardino County Building Official shall ensure that any and all remedial measures identified in the Project-specific geotechnical investigation are incorporated as notes on all final Project construction plans so that they may be implemented during Project grading and construction activities.

MM 3.D-2 Prior to the issuance of any grading permit, the San Bernardino County Building Official shall confirm that the Grading Plan incorporates specific measures from the required design-level Project-specific geotechnical investigation to address lateral spreading. The geotechnical investigation report shall comport with the provisions established in Chapter 87.08, *Soils Reports*, and Chapter 88.02, *Soil and Water Conservation*, of the San Bernardino County Code. Remedial measures shall be undertaken as recommended by the licensed geotechnical engineer and approved by the County as part of the grading operation and construction phases. Remedial measures to address lateral spreading may include, but not be limited to: removal and re-compaction of near surface soils, the use of deep foundations and/or stone columns, and deep dynamic compaction. The remedial measures undertaken shall ensure that potential lateral



movements calculated as part of the geotechnical exploration and analysis can accommodate habitable structures pursuant to CALGreen requirements as well as paved roads and wet or dry utilities, and thereby safeguard habitable structures, roads, and utility lines against potential seismic hazards. The findings of the geological explorations and recommendations shall be documented in a Project-specific geotechnical investigation report prepared by a licensed geotechnical engineer. The report shall be approved by the County and the recommendations contained in the report shall be implemented and required as grading permit and building permit conditions of approval. Prior to issuance of any grading permit, the San Bernardino County Building Official shall ensure that any and all remedial measures identified in the Project-specific geotechnical investigation are incorporated as notes on all final Project construction plans so that they may be implemented during Project grading and construction activities.

3.F.10 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Threshold j: Less-than-Significant Impact with Mitigation. Following the implementation of Mitigation Measure MM 3.D-1 and MM 3.D-2, the Project's potential to expose people and structures to landslides or mudslides would be reduced to a level below significance.



3.G LAND USE

This Subsection discusses consistency of the proposed Project with applicable land use and planning policies adopted by San Bernardino County and other governing agencies for the purpose of reducing adverse effects on the physical environment. This Subsection also addresses present and future land uses, zoning, and the physical arrangement of uses on the land. Information used to support the analysis in this Subsection was obtained in part from the 2007 San Bernardino County General Plan (San Bernardino County, 2007a), the 2007 San Bernardino County General Plan Program Final EIR (San Bernardino County, 2007b), the Lake Arrowhead Community Plan (San Bernardino County, 2007c), the San Bernardino County Development Code (San Bernardino County, 2018), the San Bernardino County Municipal Code (San Bernardino County, 2017), and the San Bernardino County Zoning and Overlay Maps (various references). Refer to DREIR Subsection 7.0, *References*, for a complete list of reference sources.

3.G.1 ENVIRONMENTAL SETTING

3.G.1.1 EXISTING ON-SITE AND ADJACENT LAND USES

The Project site consists of approximately 27.12 acres of privately-owned vacant undeveloped land located in the community of Rimforest within the San Bernardino National Forest (SBNF). The Project site is located immediately north of State Route 18 (SR-18), approximately 0.5 mile south of State Route 189 (SR-189), and approximately 1.2 miles west of State Route 173 (SR-173). The Project site is currently undeveloped and is comprised of hilly to steep terrain covered by montane coniferous forest. The Project site includes a northeasterly trending valley that runs along the center of the Project site and falls to the northeast. Elevations across the Project site range from approximately 5,400 feet above mean sea level (amsl) at the northeast corner of the Project site to 5,740 feet amsl on the western edge of the Project site. A natural drainage course traverses the south-central portion of the Project site that is planned to be controlled in a pipe in the future as part of the County of San Bernardino Department of Public Works' Rimforest Storm Drain Project. In the existing condition, an 8-inch subsurface sewer line traverses the Project site parallel to the existing drainage course. An abandoned groundwater well also exists on the southwest portion of the Project site.

As shown on Figure 2-3, *Surrounding Land Uses and Development*, the Project site is generally bordered by undeveloped SBNF land to the north and a drainage course that will be developed with the Rimforest Storm Drain project; Daley Canyon Road to the east; SR-18 to the immediate south with steep undeveloped mountainous terrain located farther to the south; and residential community located immediately to the west.

As shown on Figure 2-4, *Existing General Plan Land Use-Zoning Designations*, the San Bernardino County General Plan Land Use Zoning District applicable to the entirety of the Project site is Lake Arrowhead/Community Industrial (LA/IC). According to the San Bernardino County Development Code, the IC land use zoning district provides sites for light industrial uses such as light manufacturing uses, wholesale/warehouse services, contract/construction services, transportation services, agriculture support services, incidental commercial and accessory residential uses, and similar and compatible uses (San Bernardino County, 2018, p. 2-7). Table 82-17 of the San Bernardino County Municipal Code states that



places of worship are permitted within the IC land use zoning district with the County's approval of a conditional use permit (CUP) (San Bernardino County, 2017, Table 82-17). As such, the Project proposes CUP No. P201700270.

As illustrated on Figure 2-4, *Existing General Plan Land Use-Zoning Designations*, the San Bernardino County General Plan designates land to the north of the Project site IC and Single Residential (RS). The land to the east of the Project site is designated "Resource Conservation (RC). The lands located south of the Project site are designated RC, with land to the southwest of the Project site designated Office Commercial (CO), Service Commercial (CS), and Single Residential – 15,000 Sq. Ft. Min Lot Size (RS-15m). Lands to the west of the Project site are designated RS and CO.

3.G.2 REGULATORY FRAMEWORK

The Project site is located within the Mountain Planning Region of the San Bernardino County General Plan, and is located within the Lake Arrowhead Community Planning Area. As such, the plans (as well as their accompanying policies) that are applicable to the Project include the County of San Bernardino 2007 General Plan, Lake Arrowhead Community Plan, and the SBNF Land Management Plan. Additionally, the Project would be required to comply with the applicable provisions of the County of San Bernardino 2007 Development Code.

3.G.2.1 REGIONAL

A. San Bernardino County Development Code

The County of San Bernardino Development Code establishes procedures and standards for implementing the goals and policies of the County's General Plan according to specific land uses and overlay districts. The following provisions of the Development Code are applicable to the Project.

1. Community Industrial (IC) District

Land uses referenced in the Development Code are consistent with the County's General Plan; therefore, the Project site is located within the Community Industrial (IC) District. As defined by the Development Code, the IC District provides for light industrial uses, such as light manufacturing, wholesale/warehouse services, agricultural support services, and similar compatible uses. Places of worship are a permitted use within the IC District with the County's approval of a CUP.

The Development Code specifies development standards for the IC District within the Mountain Region as follows (San Bernardino County, 2018, Table 82-20A):

- Minimum lot size of 5.0 acres;
- Maximum lot dimensions (width to depth ratio) of 1:3;
- Front yard setback of 15 feet;
- Side setback (street side) of 15 feet;
- Side setback (interior) of 10 feet;
- Rear yard setback of 10 feet;



- Maximum floor area ratio (FAR) of 0.4:1;
- Maximum lot coverage of 85%; and
- Maximum structure height of 45 feet.

However, exceptions to the development standards may be requested through the development review process.

The Development Code also permits some additional recreation, education, and public assembly uses, such as places of worship and meeting facilities in the IC District subject to the County's approval of a CUP. A CUP provides a process to review the on- and off-site effects of the proposed design, location, and use(s) of proposed development projects (San Bernardino County, 2018, Chapter 85.06).

Furthermore, prior to approving a CUP application, the following findings must be made by the reviewing authority (San Bernardino County, 2018, Chapter 85.06):

- The site is adequate in size and shape to accommodate the proposed use including all features of that use;
- The site has adequate access;
- The use will not have a substantial adverse effect on abutting property, such as generating excessive noise, vibration, traffic or other disturbance or interfering with the present or future ability to use solar energy systems;
- The proposed use is consistent with the goals, maps, policies, and standards of the General Plan and any applicable community or specific plan;
- There is supporting infrastructure to accommodate the proposed development without significantly lowering service levels;
- The lawful conditions stated in the approval are deemed necessary to protect the public health and general welfare; and
- The design of the site has considered the potential for the use of solar energy systems and passive or natural heating and cooling opportunities.

2. Overlays

The Open Space (OS), Biotic Resources (BR), Geologic Hazard (GH), and Fire Safety (FS) Overlays show the Project site and contain applicable development standards and other requirements. Within the OS Overlay, the Project site is adjacent to a County Designated Scenic Route (SR-18) and the Strawberry Creek wildlife corridor (San Bernardino County, 2007d). Because the Project site is located within 200 feet of a County Designated Scenic Route (SR-18), development criteria for the OS Overlay are applicable to the proposed Project, as further described in DREIR Subsection 3.A, *Aesthetics*. The OS Overlay Map also appears to show the Project site is partially located within a portion of the Strawberry Creek wildlife corridor, as further analyzed in DREIR Subsection 3.C, *Biological Resources*. The Project site is designated as a BR Overlay, because Southern Rubber Boa habitat has been identified on or in the vicinity of the Project site. Therefore, in conformance with applicable requirements within a BR Overlay, a report has been prepared by a qualified biologist that includes a description of existing biological resources, potential impacts on these resources, and recommended mitigation measures as described in DREIR Subsection 3.C, *Biological Resources*.



Additionally, the BR Overlay Map indicates Flying Squirrel habitat and Arroyo Toad habitat is potentially present at the Project site (San Bernardino County, 2012). The Project site is located within a GH Overlay, because the area is potentially subject to landslides (San Bernardino County, 2010a). To address this and other potential geologic hazards, a Geologic and Soils Engineering Investigation was prepared for the proposed Project to identify existing geologic conditions and provide recommendations for development as further described in Subsection 3.D, *Geology and Soils*. Within the FS Overlay, the Project site is identified as Fire Safety Area 1 (FS1), a high fire hazard area located within the mountains (San Bernardino County, 2010a). Building standards and design requirements applicable to proposed development projects within FS1 are described in DREIR Subsection 4.E, *Hazards*. A component of the FS Overlay is the preparation of a Soil and Sediment Control Plan, which is addressed in DREIR Subsection 3.F, *Hydrology and Water Quality*.

3. *Plant Protection and Management Requirements (San Bernardino County Development Code Chapter 88.01)*

Because the Project site is comprised of undeveloped forest land and would involve the removal of native trees and plants, the provisions within Chapter 88.01 of the San Bernardino County Development Code would be applicable. Chapter 88.01 of the County Development Code establishes requirements and guidelines for the management of plant resources and requires a Tree or Plant Removal Permit, as further described in DREIR Subsection 3.C, *Biological Resources*.

B. *San Bernardino County General Plan*

The County of San Bernardino 2007 General Plan (General Plan) is the primary policy document for the unincorporated areas of San Bernardino County. The General Plan contains goals and policies for eight elements of the Plan (Land Use, Circulation and Infrastructure, Housing, Open Space, Conservation, Safety, Noise, and Economic Development). The General Plan elements most relevant to the discussion of land use are Land Use, Circulation and Infrastructure, Conservation, Open Space, and Safety. The General Plan text is supported by a series of overlay maps that depict hazards, roads, and natural resources. According to these maps and supporting policies, and as further described below, the Project site is located within the following overlay areas: Fire Hazard (Fire Safety Area 1), Geologic Hazard (Moderate to High Landslide Susceptibility), Biotic Resources (Southern Rubber Boa Habitat, Potential Flying Squirrel Habitat, and Arroyo Toad Habitat), Open Space (Strawberry Creek Wildlife Corridor and County Designated Scenic Route) (San Bernardino County, 2010b; San Bernardino County, 2010a; San Bernardino County, 2012; San Bernardino County, 2007d). The County of San Bernardino General Plan includes sections devoted to Countywide, regional, and sub-regional planning issues. The Project site is located within the Mountain Region Planning Area and Lake Arrowhead Community Planning Area.

County Development Code Section 81.01.090 determines how the General Plan and the requirements of the Development Code apply to a proposed development project. Development Code Section 81.01.090 provides that applications accepted as complete prior to April 12, 2007 (the effective date of the General Plan) shall be processed in compliance with the regulations and requirements in effect at the time the application was accepted as complete.



At the time that this DREIR was prepared, the County of San Bernardino was in the process of drafting an update to the General Plan, with approval of the General Plan Update estimated to be completed in 2019. Although the County is in the process of preparing a General Plan Update at that time, the document is currently in draft form and not adopted. As part of the CEQA Guidelines provisions governing the environmental setting, the CEQA Guidelines require an EIR to discuss any inconsistencies between the proposed Project and adopted plans (see CEQA Guidelines §15125(d)). An "applicable" plan is a plan that has already been adopted and thus legally applies to a project; draft plans need not be evaluated. Thus, the County's General Plan Update, which was not adopted as of October 2018 when this Draft DREIR was prepared, could not be used as the baseline (environmental setting) for this DREIR as directed by the CEQA Guidelines.

1. *Land Use Zoning Districts*

The San Bernardino County General Plan establishes 18 land use zoning districts in unincorporated portions of the County of San Bernardino. The land use zoning districts are consistently applied to the land use, zoning, and community plan designations of privately-owned parcels. As shown on Figure 2-4, *Existing General Plan Land Use-Zoning Designations*, and previously discussed above, the land use zoning district for the Project site is LA/IC. The San Bernardino County General Plan designates land to the north of the Project site IC and "Single Residential (RS)." The land to the east of the Project site is designated "Resource Conservation (RC)." The lands located south of the Project site are designated RC, with land to the southwest of the Project site designated "Office Commercial (CO)," "Service Commercial (CS)," and "Single Residential – 15,000 Sq. Ft. Min Lot Size (RS-15m)." Lands to the west of the Project site are designated RS and CO.

Criteria for the location of the IC land use zoning districts (IC District) includes urbanized areas with full service availability; areas of existing industrial uses; areas that can be adequately buffered from adjacent uses in other land use categories; areas that have direct access to a major arterial, divided street, or freeway; and areas that have stable soil with average slope of 10% or less (San Bernardino County, 2007a, p. II-17). Building intensity standards associated with the IC District include a minimum parcel size of five (5.0) acres, maximum building coverage of 70 %, maximum building height of 75 feet, and a maximum floor area ratio (FAR) of 0.4:1. The IC District provides sites for light industrial uses, such as light manufacturing uses, wholesale/warehouse services, contract/construction services, transportation services, agriculture support services, incidental commercial and accessing residential uses, and similar and compatible uses (San Bernardino County, 2007a, Table LU-1). As discussed below, the County of San Bernardino Development Code permits some additional recreation, education, and public assembly uses, such as places of worship and meeting facilities in the IC District subject to a CUP. A CUP provides a process to review the effects of the proposed design, location, and use of a proposed development project on the site and surroundings. CUP No. P201700270 is proposed as part of the Project.

2. *Land Use Element*

The Land Use Element sets forth land use designations and zoning classifications, as well as goals, policies, and programs that guide the future distribution and intensity of development within the unincorporated portions of the County. The majority of the goals and policies contained in the General Plan's Land Use Element relate to urban communities and the arrangement and mix of residential, commercial, and industrial land uses. The following Countywide policies of the General Plan Land Use Element are applicable to the proposed Project:



- LU 1.2** The design and siting of new development will meet locational and development standards to ensure compatibility of the new development with adjacent land uses and community character.
- LU 1.4** Encourage preservation of the unique aspects of the rural communities and their rural character.
- LU 7.2** Enact and enforce regulations that will limit development in environmentally sensitive areas, such as those adjacent to river or streamside areas, and hazardous areas, such as flood plains, steep slopes, high fire risk areas, and geologically hazardous areas.

The General Plan Land Use Element contains policies specifically applicable to lands located within the Mountain Region (includes the Project site) that are designated to retain the existing alpine character of the region. Many of these policies deal with the appropriate placement and design of residential uses. Institutional and recreational uses, such as the proposed Project, are not specifically addressed. However, the following policies pertain to general development standards within natural areas and therefore are applicable to the proposed Project (San Bernardino County, 2007a, p. II-42):

- M/LU 1.1** Regulate the density of development in sloping hillside areas in order to reduce fire hazards, prevent erosion, and to preserve the forest character of the region.
- M/LU 1.6** The density and character of development shall not detract from the beauty, character and quality of the residential alpine environment.
- M/LU 1.12** Through the development review process, permit new development only when new public services required to safely provide for the development are existing or assured.
- M/LU 1.20** Closely review development projects on private land adjacent to National Forest lands to ensure that development projects are capable of meeting all development requirements within the project boundaries or other non-federal land. Provide opportunities for the U.S. Forest Service to consult with the County on development of private land that may have an adverse effect on adjoining National Forest land.

3. *Circulation and Infrastructure Element*

The Circulation and Infrastructure Element promotes the development of a coordinated transportation and infrastructure system to meet existing and projected needs throughout the County. The Project site is currently vacant and undeveloped, and does not contain any General Plan circulation facilities. SR-18, a State Highway, abuts the southern boundary of the Project site.

The Circulation and Infrastructure Element includes general goals and policies that address the transportation system; water, wastewater, and storm water; telecommunications; fire protection; law enforcement; natural gas and electricity; and education. The following Countywide transportation system and infrastructure policies are applicable to the proposed Project:



- CI 4.6** Ensure that applicants, sub-dividers and developers dedicate and improve right-of-way per County standards and contribute to their fair share of off-site mitigation.
- CI 5.3** Limit, where feasible, access along all roads intersecting major and secondary highways for a distance of 600 feet from the centerline of said highway to the maximum extent feasible.
- CI 6.1** Require safe and efficient pedestrian and bicycle facilities in residential, commercial, industrial and institutional developments to facilitate access to public and private facilities and to reduce vehicular trips. Install bicycle lanes and sidewalks on existing and future roadways, where appropriate and as funding is available (see Figure 2-11A through Figure 2-11C of the Circulation and Infrastructure Background Report).
- CI 9.1** Control the timing and intensity of future development and ensure that future development is contingent on the provision of infrastructure facilities and public services.
- CI 11.12** Prior to approval of new development, ensure that adequate and reliable water supplies and conveyance systems will be available to support the development, consistent with coordination between land use planning and water system planning.
- CI 12.11** Prior to approval of new development, ensure that adequate and reliable wastewater systems will be available to support the development, consistent with coordination between land use planning and wastewater system planning.
- CI 12.12** Cooperate with local wastewater/sewering authorities to monitor future development to ensure that development will proceed only when sufficient capacity or approved alternative wastewater treatment systems can be provided.
- CI 13.1** Utilize site-design, source-control, and treatment control best management practices (BMPs) on applicable projects, to achieve compliance with the County Municipal Stormwater NPDES Permit.
- CI 16.3** Encourage development in areas that have adequate infrastructures for the provision of fire service, which include, but are not limited to, water systems capable of delivering appropriate fire flow, and transportation networks that can provide access for fire apparatus and other emergency response vehicles as well as provide efficient egress for evacuees.

Additional transportation policies within the Mountain Region to address road design, access, and parking are also applicable to the proposed Project:

- M/CI 1.1** The County shall ensure that all new development proposals do not degrade Levels of Service (LOS) on State Routes and Major Arterials below LOS C during non-peak hours or below LOS D during peak-hours in the Mountain Region.
- M/CI 1.5** To the maximum extent possible, use alternatives to the construction of new traffic signals where they can be shown to benefit roadway capacity and are compatible with the character of the mountain region.



The additional policies that address water and storm water are presented in Section 3.F, *Hydrology and Water Quality*, of this DREIR. A description and analysis of fire protection services, including the adequacy of existing services and infrastructure and standard conditions of approval required by the Crest Forest Fire Protection District (CFFPD) are provided in Section 3.E, *Hazards*, of this DREIR.

4. Conservation Element

The General Plan Conservation Element provides for the planned management, preservation, and use of natural resources. The Conservation Element includes policies that address biological resources, cultural paleontological resources, air quality, water, soils/agriculture, minerals, and energy.

Biological resources policies address the protection and preservation of rare and endangered species and the protection of areas containing special habitat value. As shown on the Biotic Resources Overlay Map, the Project site is located within an area identified as containing Southern Rubber Boa Habitat, Potential Flying Squirrel Habitat, and Arroyo Toad Habitat. Additionally, the Open Space Element Valley and Mountain Areas Map depicts a portion of the Strawberry Creek wildlife corridor extending into the northwest area of the Project site (San Bernardino County, 2007d). Project-related impacts to Southern Rubber Boa Habitat, Potential Flying Squirrel Habitat, Arroyo Toad Habitat, and the Strawberry Creek wildlife corridor are described in Section 3.C, *Biological Resources*, of this DREIR. Project-related impacts to air quality are evaluated in Sections 3.B, *Air Quality*, and 3.J, *Greenhouse Gas Emissions*, of this DREIR. Project-related impacts to water quality are evaluated in Section 3.F, *Hydrology and Water Quality*, of this DREIR.

The following Countywide policies from the Conservation Element are applicable to the proposed Project:

- CO 2.1** The County will coordinate with state and federal agencies and departments to ensure that their programs to preserve rare and endangered species and protect areas of special habitat value, as well as conserve populations and habitats of commonly occurring species, are reflected in reviews and approvals of development programs.
- CO 2.3** In addition to conditions of approval that may be required for specific future development proposals, the County shall establish long-term comprehensive plans for the County's role in the protection of native species because preservation and conservation of biological resources are statewide, Regional, and local issues that directly affect development rights. The conditions of approval of any land use application approved with the BR overlay district shall incorporate the mitigation measures identified in the report required by Section 82.13.030 (Application Requirements), to protect and preserve the habitats of the identified plants and/or animals.
- CO 2.4** All discretionary approvals requiring mitigation measures for impacts to biological resources will include the condition that the mitigation measures be monitored and modified, if necessary, unless a finding is made that such monitoring is not feasible.
- CO 3.2** Identify and protect important archaeological and historic cultural resources in all lands that involves disturbance of previously undisturbed ground.
- CO 3.5** Ensure that important cultural resources are avoided or minimized to protect Native American beliefs and traditions.



- CO 4.1** Because developments can add to the wind hazard (due to increased dust, the removal of wind breaks, and other factors), the County will require either as mitigation measures in the appropriate environmental analysis required by the County for the development proposal or as conditions of approval if no environmental document is required, that developments in areas identified as susceptible to wind hazards to address site-specific analysis of:
- Grading restrictions and/or controls on the basis of soil types, topography or season.
 - Landscaping methods, plant varieties, and scheduling to maximize successful revegetation.
 - Dust-control measures during grading, heavy truck travel, and other dust generating activities.
- CO 4.4** Because congestion resulting from growth is expected to result in a significant increase in the air quality degradation, the County may manage growth by insuring the timely provision of infrastructure to serve new development.
- CO 4.13** Reduce Greenhouse Gas (GHG) emissions within the County boundaries.
- CO 5.4** Drainage courses will be kept in their natural condition to the greatest extent feasible to retain habitat, allow some recharge of groundwater basins and resultant savings. The feasibility of retaining features of existing drainage courses will be determined by evaluating the engineering feasibility and overall costs of the improvements to the drainage courses balanced with the extent of the retention of existing habitat and recharge potential.
- CO 8.6** Fossil fuels combustion contributes to poor air quality. Therefore, alternative energy production and conservation will be required, as follows:
- New developments will be encouraged to incorporate the most energy-efficient technologies that reduce energy waste by weatherization, insulation, efficient appliances, solar energy systems, reduced energy demand, efficient space cooling and heating, water heating, and electricity generation.
 - All new subdivisions for which a tentative map is required will provide, to the extent feasible, for future natural heating or cooling opportunities in the subdivision. This can be accomplished by design of lot size and configuration for heating or cooling from solar exposure or shade and breezes, respectively.
 - For all new divisions of land for which a tentative map is required, a condition of approval will be the dedication of easements, for the purpose of assuring solar access, across adjacent parcels or units.
- CO 8.8** Promote energy-efficient design features, including appropriate site orientation, use of lighter color roofing and building materials, and use of deciduous shade trees and windbreak trees to reduce fuel consumption for heating and cooling.

The Conservation Element of the General Plan includes goals and policies applicable to the Mountain Region that have been established to preserve native wildlife, vegetation, water resources, scenic vistas, and night sky. Project-related impacts to biological resources and water quality are addressed in DREIR Sections 3.C,



Biological Resources, and 3.F, *Hydrology and Water Quality*, respectively. Project-related impacts to scenic resources, scenic vistas, and lighting are discussed in Section 3.A, *Aesthetics*, of this DREIR.

Policies from the Conservation Element pertaining to the Mountain Region that are applicable to the Project include the following:

- M/CO 1.2** Protect scenic vistas by minimizing ridgeline development that would substantially detract from the scenic quality of major ridgeline viewsheds.
- M/CO 1.4** Designate and protect unique habitats supporting rare and endangered species.
- M/CO 1.7** Encourage conservation and sound management of the mountain forest character and natural resources, including water, streams, vegetation, soils and wildlife. Require the planting of native or drought-tolerant cultivar species, capable of surviving the mountain environment and climate.
- M/CO 2.3** Require the re-vegetation of any graded surface with suitable native drought and fire-resistant planting to minimize erosion.
- M/CO 2.7** Through the development review process, require replanting of ground cover in denuded areas with vegetation, either indigenous to the area or compatible with the montane climate and soil characteristics.
- M/CO 2.8** When feasible, require developers through the development review process to substantially maintain existing percolation and surface water runoff on site.
- M/CO 3.1** Utilize open space and drainage easements as well as clustering of new development as stream preservation tools.
- M/CO 3.2** Require naturalistic drainage improvements where modifications to the natural streamway are required.
- M/CO 3.3** Prohibit exposed concrete drainage structures. Acceptable designs include combinations of earthen landscaped swales, rock rip-rap lined channels or rock-lined concrete channels. Property owners must provide for the maintenance of underground drainage structures.
- M/CO 3.6** Minimize the runoff of surface water and establish controls for soil erosion and sedimentation through the following policies:
 - a. Through the development review process, require replanting of ground cover in denuded areas with revegetation, either indigenous to the area or compatible with the climate and soil characteristics of the region.
 - b. When development occurs, provide for the retention of natural drainage channels and capacity of the site where feasible.



- c. When feasible, require developers, through the development review process, to maintain existing percolation and surface water runoff rate by discouraging the paving of large surface areas.

- M/CO 3.9** Support and apply water conservation and reuse measures through the development review process.
- M/CO 4.1** Identify and protect significant cultural resources from damage or destruction.
- M/CO 5.3** Review exterior lighting as part of the design review process.
- M/CO 5.4** All outdoor lighting, including street lighting, shall be provided in accordance with the Night Sky Protection Ordinance and shall only be provided as necessary to meet safety standards.

5. Open Space Element

The Open Space Element of the General Plan guides the protection and preservation of open space, recreation, and scenic areas within the County. Applicable policies include the use of open space corridors to link natural areas and the enhancement of scenic routes and resources. The Open Space Element includes the Open Space Overlay Map, which appears to depict a portion of the Strawberry Creek wildlife corridor occurring on the northwest corner of the Project site, and also indicates SR-18 (abuts the Project site to the south) is a County Designated Scenic Route (San Bernardino County, 2007d). Project-related impacts to aesthetics (including scenic resources) and biological resources are evaluated in Subsection 3.A, *Aesthetics*, and Subsection 3.C, *Biological Resources*, of this DREIR.

Policies from the General Plan Open Space Element that are applicable to the Project include the following:

- OS 2.7** Monitor all dedicated public trails and/or easements on a continuing basis and maintain an up-to-date map of all existing and proposed dedicated public trail easements on the Open Space Overlay Map. Existing trail easements or alignments will be mapped in their correct positions; proposed alignments will be mapped in general locations. The Open Space Overlay Map will be reviewed during consideration of applications for permits or development approvals to ensure that new development does not result in loss of existing or potential public use of dedicated easements.
- OS 3.7** Use open space corridors to link natural areas.
- OS 4.2** The County will preserve and encourage the management of suitable land for greenbelts, forests, recreation facilities and flood control facilities to assist the County's efforts to provide adequate water supply, achieve air quality improvement, and provide habitat for fish, wildlife and wild vegetation.
- OS 5.1** Features meeting the following criteria will be considered for designation as scenic resources:
- a. A roadway, vista point, or area that provides a vista of undisturbed natural areas.
 - b. Includes a unique or unusual feature that comprises an important or dominant portion of the viewshed (the area within the field of view of the observer).



- c. Offers a distant vista that provides relief from less attractive views of nearby features (such as views of mountain backdrops from urban areas).

OS 5.2 Define the scenic corridor on either side of the designated route, measured from the outside edge of the right-of-way, trail, or path. Development along scenic corridors will be required to demonstrate through visual analysis that proposed improvements are compatible with the scenic qualities present.

OS 5.3 The County desires to retain the scenic character of visually important roadways throughout the County. A “scenic route” is a roadway that has scenic vistas and other scenic and aesthetic qualities that over time have been found to add beauty to the County. Therefore, the County designates the following routes as scenic highways and applies all applicable policies to development on these routes (see Figures 2-4A through 2-4C of the Circulation and Infrastructure Background Report):

Mountain Region:

- a. Crest Forest Drive from State Route 18 west to Sawpit Canyon Road.
- b. Dart Canyon Road.
- c. Devil’s Canyon Road.
- d. Grass Valley Road.
- e. Green Valley Lake Road/101 Mile Drive.
- f. Kuffel Canyon Road.
- g. Lake Drive from Knapps Cutoff northeast to Dart Canyon Road.
- h. Lake Gregory Drive.
- i. Lone Pine Canyon Road.
- j. Mt. Baldy Road from Los Angeles County line northeast to Mt. Baldy.
- k. North Road from Lake Gregory Drive northeast to State Route 189.
- l. Oak Glen Road.
- m. Old Waterman Canyon Road
- n. Playground Drive.
- o. Rim of the World Drive from Green Valley Lake Road to State Route 38.

Multiple Regions:

- a. Baldwin Lake Road from State Route 18 southeast to Pioneer Town Road; continuing east on Pioneer Town Road to Burns Canyon Road; continuing southeast on Burns Canyon Road to Rimrock Road; and continuing southeast on Rimrock Road to Pipes Canyon Road.
- b. Coxey Truck Trail from Bowen Ranch Road southeast to Rim of the World Drive.



- c. Interstate 15 from the junction with Interstate 215 northeast to the Nevada state line, excepting those areas within the Barstow Planning Area and the community of Baker where there is commercial/industrial development; those portions within the Yermo area from Ghost Town Road to the East Yermo Road overcrossing on the south side only and from First Street to the East Yermo Road overcrossing on the north side; and all incorporated areas.
- d. State Route 18 from San Bernardino northeast to the City of Big Bear Lake; from Big Bear Lake northwest to Apple Valley; within the Victorville sphere of influence; and from Victorville and Adelanto to the Los Angeles County line.
- e. State Route 38 from Garnet St. in Mentone northeast to Big Bear Dam
- f. State Route 138 from Crestline cutoff at State Route 18 northwest to Los Angeles County line.
- g. State Route 173 from State Route 18 northwest to Hesperia.

OS 7.2 For natural open space areas that require separation from human activity to preserve their function and value, limit construction of roads into or across natural open space areas.

OS 7.5 Require that natural landform and ridgelines be preserved by using the following measures:

- a. Keep cuts and fills to an absolute minimum during the development of the area.
- b. Require the grading contours that do occur to blend with the natural contours on site or to look like contours that would naturally occur.
- c. Encourage the use of custom foundations in order to minimize disruption of the natural landform.
- d. Require that units located in the hillsides be so situated that roof lines will blend with and not detract from the natural ridge outline.

OS 7.6 Require that hillside development be compatible with natural features and the ability to develop the site in a manner that preserves the integrity and character of the hillside environment, including but not limited to, consideration of terrain, landform, access needs, fire and erosion hazards, watershed and flood factors, tree preservation, and scenic amenities and quality.

Policies from the General Plan Open Space Element that are specific to the Mountain Planning Region and applicable to the Project include the following:

M/OS 2.1 Utilize setbacks, building coverage, the Planned Development concepts and other measures to protect the forest environment.

M/OS 2.5 Encourage the addition of bicycle routes whenever existing highways are widened or significant lengths of highways are improved.

M/OS 2.6 Where appropriate, require pedestrian walkways in commercial, industrial and major multiple family residential developments.



M/OS 2.7 Provide pedestrian linkages between adjacent commercial areas and adjoining residential areas, to encourage foot traffic and reduce automobile trips.

6. Safety Element

The purpose of the Safety Element of the General Plan is to reduce potentials risks to the community associated with natural and man-made hazards such as seismic; geologic; wildfires; flooding; wind and erosion; and hazardous waste. As shown on the County's Geologic Hazard Overlay Map, the Project site is located within an area that may be subject to low to moderate landslide activity. In conformance with policies related to geologic hazards, a Geology and Soils Engineering Investigation was prepared for the proposed Project and reviewed by the County Geologist. A detailed discussion of potential geologic hazards and Project-specific recommendations are presented in Subsection 3.D, *Geology and Soils*, of this DREIR.

As indicated on the County's Hazard Overlay Map, the Project site is located within Fire Safety Area 1 (San Bernardino County, 2010b). Regulations applicable to development within a Fire Safety Area and standard conditions of approval imposed by the Crest Forest Fire Protection District (CFFPD) that would minimize fire hazards are provided in Subsection 3.E, *Hazards*, of this DREIR.

Policies from the General Plan Safety Element that are applicable to the Project include the following:

- S 3.3** Minimize the fire hazard posed by expanding development in wildland/urban intermix areas.
- S 4.2** Apply the provisions of the Revised Erosion and Sediment Control Ordinance countywide.
- S 4.3** Tailor grading, land clearance, and grazing to prevent unnatural erosion in erosion susceptible areas.
- S 5.5** Require specific hydrology and hydraulic studies for development proposals to avoid spot flooding from small streams or unmapped areas adjacent to mapped flood areas.
- S 5.6** Prevent flood hazard resulting from drainage from adjacent development.
- S 6.1** Require development on hillsides to be sited in such a manner that minimizes the extent of topographic alteration required to minimize erosion, to maintain slope stability, and to reduce the potential for offsite sediment transport.
- S 7.6** Protect life and property from risks resulting from landslide, especially in San Bernardino and San Gabriel Mountains that have high landslide potential.
- S 9.2** Ensure that future developments have no less than two points of access for emergency evacuation and for emergency vehicles, in the event of wildland fires and other natural disasters.

Policies from the General Plan Safety Element that are specific to the Mountain Planning Region and applicable to the Project include the following:



- M/S 1.1** Designate the following roads and highways as evacuation routes in the in the Mountain Region: State Highways 2, 18, 38, 138, 189 and 330, and Mount Baldy Road.
- M/S 1.2** Encourage expansion or development of fuel breaks adjacent to residential populated areas within the Mountain Region in a manner consistent with the intent of the General Plan.

C. SCAG 2008 RCP and 2016-2040 RTP/SCS

The Southern California Association of Governments (SCAG) is a Joint Powers Authority (JPA) under California state law, established as an association of local governments and agencies that voluntarily convene as a forum to address regional issues. Under federal law, SCAG is designated as a Metropolitan Planning Organization (MPO) and under state law as a Regional Transportation Planning Agency and a Council of Governments. The SCAG region encompasses six (6) counties (Imperial, Los Angeles, Orange, Riverside, San Bernardino and Ventura) and 191 cities in an area covering more than 38,000 square miles. SCAG develops long-range regional transportation plans including sustainable communities' strategy and growth forecast components, regional transportation improvement programs, regional housing needs allocations, and other plans for the region.

As a MPO and public agency, SCAG develops transportation and housing plans that transcend jurisdictional boundaries that affect the quality of life for southern California as a whole. SCAG's 2008 Regional Comprehensive Plan (RCP) and 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) serve as advisory documents to local agencies in the Southern California region for their information and voluntary use for preparing local plans and handling local issues of regional significance. The RCP identifies voluntary best practices to approach growth and infrastructure challenges in an integrated and comprehensive way.

3.G.2.2 LOCAL

A. Lake Arrowhead Community Plan

The LACP includes goals and policies that are refinements to those provided in the County General Plan and are generally designed to preserve the small-town mountain character of the LACP. The LACP includes goals and policies within the Land Use, Circulation and Infrastructure, Conservation, Open Space, and Safety elements that are relevant to the proposed Project, as discussed below.

1. Land Use Element

Figure 2, *Policy Land Use*, of the LACP shows the Project site is designated Community Industrial (IC) and surrounded by San Bernardino National Forest land to the north, east, and south; Single Residential (RS-14M) to the west; and RS, Single Residential to the south (San Bernardino County, 2007c, Figure 2). A FAR of 0.4:1 within the IC designation is also indicated in Table 2 of the LACP (San Bernardino County, 2007c, Table 2).

The following goals and policies of the land use element are applicable to the proposed Project:

- LA/LU 1.** Retain the existing resort-oriented mountain character of the community.



- LU/LU 1.5** All architecture and outside facades of commercial structures shall be in keeping with the mountain character. Natural woods and masonry shall be used as much as practicable, and shall be reviewed for conformance during the Land Use Services Conditional Use Permit approval process.

2. Circulation and Infrastructure Element

The Circulation Map of the Circulation and Infrastructure Element of the LACP designates SR-18 and Daley Canyon Road as Mountain Major Highways. The San Bernardino County General Plan Open Space Overlay Map depicts SR-18 as a County Designated Scenic Route. This Circulation and Infrastructure Element also includes goals and policies related to water resources.

The following circulation and infrastructure goals and policies from the LACP are applicable to the Project:

- LA/CI 1.** Ensure a safe and effective transportation system that provides adequate traffic movement while preserving the mountain character of the community.
- LA/CI 1.1** Ensure that all new development proposals do not degrade Levels of Service (LOS) on State Routes and Major Arterials below LOS “C” during non-peak hours or below LOS “D” during peak-hours.
- LA/CI 1.6** Minimize the traffic load on mountain major highways and mountain secondary highways by requiring projects to minimize direct access to these main circulation roads, and encourage shared driveways for industrial and commercial uses on adjacent properties to promote use of the main circulation roads as throughways.
- LA/CI 1.7** Provide access control, traffic system management and other improvements on the roadway system within the plan area in keeping with the scenic sensitivity of the community plan area. One method this can be accomplished by is, to the maximum extent possible, use alternatives to the construction of new traffic signals where they can be shown to benefit roadway capacity and are compatible with the mountain character of the community.
- LA/CI 1.8** Preserve the status of Kuffel Canyon, Grass Valley Road, SR-173 and SR-18 as County Scenic Routes, and ensure protection of their natural features through the following methods:
- A. Require compliance with the provisions of the Open Space Overlay.
 - B. Support hillside preservation regulations that will include standards for hillside development to control densities, allowable cut and fill heights, soil and slope stability, grading and blending of contours, structural relationships, building foundations, and the like.
- LA/CI 1.10** Protect rights-of-way for mountain highways shown on the circulation portion of the County General Plan. The Public Works department shall require dedications as entitlements are given.
- LA/CI 1.11** Design road sections for mountain roads to be flexible in terms of required right of way widths and roadway widths, however, existing two-lane roads should be maintained. Road widenings



should be limited to safety type improvements and those that would facilitate flow such as turning lanes, passing lanes, intersection widenings and shoulder widenings.

- LA/CI 1.12** Require a traffic impact analysis report to identify impacts and mitigation measures for projects that may result in potentially significant impacts and limit new construction which would require significant improvements to the existing road system in order to handle project ingress, egress and traffic volumes until such time that the required improvements are completed. Significant improvements include anything other than additional turn lanes, transition lanes and stop signs.
- LA/CI 1.13** All other methods of traffic control shall be considered before adding a traffic light within the community plan area. The County shall coordinate with Caltrans to implement this policy on State Highways within the plan area.
- LA/CI 5.1** Through the development review process, permit new development only when adequate water supply exists or can be assured.
- LA/CI 5.5** Ensure that the required infrastructure is in place prior to the occupancy of any new development project.
- LA/CI 7** Ensure that infrastructure improvements are visually and physically compatible with the natural environment and mountain character of the community.
- LA/CI 7.1** Work with the United States Forest Service to ensure that improvements or development of infrastructure facilities adjacent to the National Forest are non-invasive and do not adversely affect the natural environment.
- LA/CI 7.2** Mitigate the visual impacts of facilities, structures, utilities and mechanical installations through the development of appropriate screening and location criteria.
- LA/CI 7.3** Coordinate with service providers to relocate existing overhead utilities underground along existing roadways and require underground utilities in new developments.

3. Conservation Element

The following goals and policies for conservation of natural resources within the LACP are relevant to the proposed Project:

- LA/CO 1** Preserve the unique environmental features of Lake Arrowhead including native wildlife, vegetation, and scenic vistas.
- LA/CO 1.1** The following areas are recognized as important open space areas that provide for wildlife movement and other important linkage values. Projects shall be designed to minimize impacts to these corridors.
- A. Grass Valley Creek Wildlife Corridor
 - B. Strawberry Creek Wildlife Corridor
 - C. Dispersion Corridor - between Lake Arrowhead and Running Springs and south of Highway 18.



- LA/CO 1.3** Protect scenic vistas by minimizing ridgeline development that would substantially detract from the scenic quality of major ridgeline viewsheds.
- LA/CO 2** Maintain the health and vigor of the forest environment.
- LA/CO 2.3** Require the re-vegetation of any graded surface with suitable native drought and fire-resistant planting to minimize erosion.
- LA/CO 2.5** Require an approved landscape plan as part of the location and development plan review and approval process for all proposed residential, commercial and industrial projects. Projects within the LACSD service area shall conform to LACSD-adopted mandatory landscape standards.
- LA/CO 3** Protect streambeds and creeks from encroachment or development that detracts from their beauty.
- LA/CO 3.1** Utilize open space and drainage easements as well as clustering of new development as stream preservation tools.
- LA/CO 3.2** Require naturalistic drainage improvements where modifications to the natural streamway are required.
- LA/CO 3.3** Prohibit exposed concrete drainage structures. Acceptable designs include combinations of earthen landscaped swales, rock rip-rap lined channels or rock-lined concrete channels. Property owners must provide for the maintenance of underground drainage structures.

4. Open Space

The Open Space Element of LACP includes the following goals and policies regarding open space corridors that are relevant to the proposed Project:

- LA/OS 4** Improve and preserve open space corridors throughout the plan area.
- LA/OS 4.1** Where possible, require that open space areas set aside within individual developments be contiguous to natural areas adjacent to the site. Isolated open space areas within development shall be specifically discouraged, but may be accepted if no adjacent open space areas are available.
- LA/OS 4.2** Use open space corridors to link natural areas.

5. Safety

The Safety Element of the LACP includes the following policy that addresses fire safety which is applicable to the Project:

- LA/S 1.1** Ensure that all new development complies with applicable provisions of the Fire Safety Overlay.



Project-related fire safety impacts are evaluated in Subsection 3.E, *Hazards*, of this DREIR.

B. San Bernardino National Forest Land Management Plan

Although the Project site is within the San Bernardino National Forest – North, the site is designated as Non-Forest System Land, because the property is privately owned and not subject to the San Bernardino National Forest Land Management Plan. However, undeveloped U.S. Forest Service land is located to the north of the Project site and to the south of the Project site beyond SR-18 which would be subject to this Plan.

3.G.3 THRESHOLDS OF SIGNIFICANCE

The following significance criteria for land use and planning are based on Appendix G of the State CEQA Guidelines and adjusted for relevance to this analysis based on local conditions and the project description. Using these thresholds, the proposed Project would have a significant impact related to land use if it would result in any of the following:

- a. *Project physically divide an established community;*
- b. *Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect;*
- c. *Conflict with any applicable habitat conservation plan or natural community conservation plan;*

The Initial Study (DREIR *Technical Appendix A*) prepared for the Project concluded that the Project would neither divide an established community (Threshold a) nor would it conflict with an applicable habitat conservation plan or natural community conservation plan (Threshold c). The Initial Study concluded that the Project's consistency with the goals and policies of the General Plan and Development Code criteria should be evaluated in this DREIR. Therefore, based in part on the criteria established in CEQA Guidelines Appendix G, the proposed Project would cause a significant impact if the Project would conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

Threshold b emphasizes conflicts with plans or policies adopted for the purposes of avoiding or mitigating an environmental effect. Recognizing that an inconsistency with a plan, policy, or regulation does not necessarily equate to a significant physical impact on the environment. Where a plan is adopted for the purpose of avoiding or mitigating a physical impact on the environment, an inconsistency may be evidence that the Project may result in a significant effect on the environment, but the inconsistency in and of itself is not regarded as a significant impact, but the inconsistency in and out of itself is not regarded as a significant impact.



3.G.4 ENVIRONMENTAL IMPACTS

3.G.4.1 METHODOLOGY

Under CEQA, the environmental setting for purposes of preparing an EIR is based on the date the EIR's Notice of Preparation (NOP) is released for public review. Specifically, CEQA Guidelines Section 15125(e) indicates that "[w]here a proposed project is compared with an adopted plan, the analysis shall examine the existing physical conditions at the time the notice of preparation is published." The County of San Bernardino released the NOP for this DREIR on March 11, 2005. At this time, the San Bernardino County 2007 General Plan (amended April 24, 2014) was the approved and prevailing General Plan for the County. At the time this DREIR was drafted, the County was considering an update to the General Plan. In August of 2018, the County of San Bernardino released the public review draft of the General Plan update; however, the General Plan update was not yet adopted. As part of the CEQA Guidelines provisions governing the environmental setting, the CEQA Guidelines require an EIR to discuss any inconsistencies between the proposed Project and adopted plans (see CEQA Guidelines §15125(d)). An "applicable" plan is a plan that has already been adopted and thus legally applies to a project; draft plans need not be evaluated. Thus, the County's draft General Plan update, which was not adopted as of April 2017 (the time the analysis for this DREIR commenced), should not be used as the baseline (environmental setting) for this DREIR as directed by the CEQA Guidelines. It is acknowledged herein that the County of San Bernardino's Board of Supervisors anticipate the adoption the County's updated General Plan to occur in 2019. However, because the adoption of the updated General Plan has not yet occurred and would take place following the time that the Project's revised CUP application was submitted and CEQA analysis commenced (which occurred on April 21, 2017), this Subsection evaluates the General Plan land use designations and policies that were adopted and applicable at the time that the Project's revised CUP application was submitted and CEQA analysis commenced.

This analysis focuses on the consistency of the proposed Project with the County of San Bernardino 2007 General Plan and Development Code, LACP, and the San Bernardino National Forest Land Management Plan. The determination of consistency with applicable land use plans, goals, policies and ordinances is based upon a review of the previously described planning documents that regulate land use or guide land use decisions relevant to the Project site and proposed Project. Although determinations of Project consistency with plans or policies are not precise or quantitative, the primary objective of this analysis is to highlight the physical impacts of the Project that may also represent inconsistencies with plans and policies.

3.G.5 IMPACT ANALYSIS

Threshold b) *Would the Project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?*

1. County of San Bernardino General Plan

The relationship of the proposed Project to the relevant goals and policies of the County of San Bernardino General Plan identified above are presented in Table 3.G-1, *San Bernardino General Plan Consistency Analysis*. As identified on this table, the proposed Project would conflict with General Plan Policy M/CI 1.1 related to levels of service on Project area roadways. The Project would not conflict with any other policies



in the General Plan adopted for the purpose of avoiding or mitigating an environmental effect. Accordingly, the Project would result in a significant land use impact to the environmental only due to the conflict with General Plan Policy M/CI 1.1.



Table 3.G-1 San Bernardino General Plan Consistency Analysis

General Plan Policy	Project Consistency
<u>Land Use Element</u>	
LU 1.2: The design and siting of new development will meet locational and development standards to ensure compatibility of the new development with adjacent land uses and community character.	The Project would be compatible with adjacent land uses and community character. The Project would preserve approximately 13.5 acres (or 50 %) of the Project site as natural open space. As described in DREIR Subsection 3.A, <i>Aesthetics</i> , landscaping along the southern and western boundary (adjacent to a scenic highway and residential uses) would include replacement trees and plant materials native to the mountain region to maintain a natural appearance and the proposed structures would be designed to blend in with the natural environment to the maximum extent feasible. Therefore, the proposed Project would not conflict with this policy.
LU 1.4: Encourage preservation of the unique aspects of the rural communities and their rural character.	The Project would preserve approximately 50 % of the Project site as natural open space, with the remainder of the site developed with church buildings, sports fields, landscaped areas, and internal circulation and parking areas. As described in DREIR Subsection 3.A, <i>Aesthetics</i> , the on-site improvements proposed by the Project have been designed to blend in with the natural environment to the maximum extent feasible. The proposed Project would also be less intense than the industrial uses permitted within the IC land use zoning district that is currently applicable to the Project site. Accordingly, the Project would not conflict with Policy LU 1.4.
LU 7.2: Enact and enforce regulations that will limit development in environmentally sensitive areas, such as those adjacent to river or streamside areas, and hazardous areas, such as flood plains, steep slopes, high fire risk areas, and geologically hazardous areas.	As described in DREIR Subsection 3.C, <i>Biological Resources</i> , with implementation of the required mitigation measures, direct Project-specific impacts to environmentally sensitive areas, such as Southern Rubber Boa, San Bernardino flying squirrel and California spotted owl habitat, would be less than significant with the incorporation of mitigation measures although the Project would result in a cumulatively considerable impact to the habitat associated with these species. Regarding development in hazardous areas, the Project would be subject to the development standards of the Fire Safety Overlay and other standard conditions of approval imposed by the Crest Forest Fire Protection District (CFFPD) that would reduce potential fire hazards to a less-than-significant level, as described in DREIR Subsection 3.E, <i>Hazards</i> . The Project



General Plan Policy	Project Consistency
	site is also located within a Geologic Hazards Overlay, which indicates a portion of the site is susceptible to landslides. As described in DREIR Subsection 3.D, <i>Geology and Soils</i> , implementation of mitigation measures would require that a Project-specific geotechnical investigation that fully evaluates potential landslide hazards and that any remedial measures recommended in the Project-specific geotechnical investigation be implemented prior to issuance of a grading permit. With implementation of these mitigation measures, impacts associated with geological hazards would be reduced to a less-than-significant level. Therefore, the Project would not conflict with Policy LU 7.2.



General Plan Policy	Project Consistency
<u>Land Use Element Policies specific to the Mountain Planning Region</u>	
M/LU 1.1: Regulate the density of development in sloping hillside areas in order to reduce fire hazards, prevent erosion, and to preserve the forest character of the region.	<p>The Project would be less intense than industrial uses permitted within the IC District and would retain approximately 50 % of the Project site as natural open space. Development of the proposed Project on the remaining 50 % of the Project site would develop the existing hillside topography with the proposed Church of the Woods facilities described in DREIR Section 2.0, <i>Project Description</i>, in accordance with the development standards applicable to the IC District. Additionally, the Project has been designed to blend in with the natural environment to the maximum extent feasible.</p> <p>The proposed Project would be subject to the development standards of the Fire Safety Overlay and other standard conditions of approval imposed by the CFFPD to reduce fire hazards. Development of the proposed Project would also be required to implement Mitigation Measures MM 3.D-1 and MM 3.D-2, which would require a Project-specific geotechnical investigation be performed and remedial measures implemented to address potential erosion-related impacts. Additionally, in order to address potential erosion impacts, the Project would be required to comply with the provisions of South Coast Air Quality Management District (SCAQMD) Rule 403, obtain a National Pollutant Discharge Elimination System (NPDES) permit for construction activities, and implement a Project-specific Storm Water Pollution Prevention Plan (SWPPP).</p> <p>Based on the foregoing, the Project would not conflict with Policy M/LU 1.1.</p>
M/LU 1.6: The density and character of development shall not detract from the beauty, character and quality of the residential alpine environment.	<p>The Project has been designed blend in with the natural environment to the maximum extent feasible to minimize detracting from the residential alpine environment. Approximately 50 % of the Project site would be retained as natural open space. As detailed in DREIR Subsection 3.A, <i>Aesthetics</i>, landscaping along the western boundary (adjacent to residential uses) and SR-18 (a designated scenic highway), would include replacement trees and plant materials native to the alpine environment. The density and character of the proposed church and recreation uses would be more compatible with the</p>



General Plan Policy	Project Consistency
	residential alpine environment than the more intense industrial uses that could be developed on the Project site consistent with the existing applicable IC District. Because the Project has been designed to be compatible with the character and scale of the surrounding residential alpine environment; would comply with the development standards applicable within the IC District; and would preserve approximately 50 % of the Project site as natural open space, the Project would not conflict with Policy M/LU 1.6.
M/LU 1.12: Through the development review process, permit new development only when new public services required to safely provide for the development are existing or assured.	New public/infrastructure services required for the Project site, such as water, sewer, and storm drains can be readily extended from existing facilities. In addition, water supply would be available to meet the water and fire flow demands of the proposed Project, as analyzed in DREIR Subsection 3.F, <i>Hydrology, Water Quality, and Water Supply</i> , and DREIR Subsection 3.E, <i>Hazards</i> . As evaluated in the Project's Initial Study (DREIR <i>Technical Appendix A</i>), development of the Project would not require an expansion of police or fire facilities or exceed the service capabilities of fire and police services. Therefore, the Project would not conflict with Policy M/LU 1.12.
M/LU 1.20: Closely review development projects on private land adjacent to National Forest lands to ensure that development projects are capable of meeting all development requirements within the Project boundaries or other non-federal land. Provide opportunities for the U.S. Forest Service to consult with the County on development of private land that may have an adverse effect on adjoining National Forest land.	Consultation with the U.S. Forest Service about the proposed Project has been addressed through the County's development review process. Potential issues related to the adjacent San Bernardino National Forest land that abuts the Project site to the north, and located across SR-18 to the south have been analyzed in relevant sections of this DREIR and applicable design features and/or mitigation measures have been imposed to reduce impacts to a level below significance. Accordingly, the Project would not conflict with Policy M/LU 1.20.
<u>Circulation and Infrastructure Element</u>	
CI 4.6: Ensure that applicants, sub-dividers, and developers dedicate and improve right-of-way per County standards and contribute to their fair share of off-site mitigation.	The Project proposes to widen SR-18 for approximately 300 feet easterly and westerly of the Project driveway to include an eastbound left-turn lane and westbound deceleration/acceleration lane. The improvements the Project proposes to make to the SR-18 right-of-way (ROW) would be required to adhere to County standards. Additionally, DREIR Subsection 3.I, <i>Transportation and</i>



General Plan Policy	Project Consistency
	<i>Circulation</i> , evaluates the Project's potential impacts on affected circulation facilities, and imposes mitigation measures that would reduce Project-related impacts on such facilities to a level that is below significance.
CI 5.3: Limit, where feasible, access along all roads intersecting major and secondary highways for a distance of 600 feet from the centerline of said highway to the maximum extent feasible.	As shown on Figure 2-7, <i>Proposed Site Plan</i> , the proposed primary access would be located approximately 950 feet west of Daley Canyon Road, a Mountain Major Highway. Therefore, the Project would not conflict with this policy.
CI 6.1: Require safe and efficient pedestrian and bicycle facilities in residential, commercial, industrial and institutional developments to facilitate access to public and private facilities and to reduce vehicular trips. Install bicycle lanes and sidewalks on existing and future roadways, where appropriate and as funding is available (see Figure 2-11A through Figure 2-11C of the Circulation and Infrastructure Background Report).	Internal sidewalks are designed throughout the Project site to facilitate efficient pedestrian and bicycle circulation within the Project site. Therefore, the Project would not conflict with Policy CI 6.1.
CI 9.1: Control the timing and intensity of future development and ensure that future development is contingent on the provision of infrastructure facilities and public services.	Infrastructure services, such as water, sewer, and storm drains are readily available and in close proximity to the Project site, as documented in the Project's Initial Study (refer to DREIR <i>Technical Appendix A</i>). Additionally, as concluded in the Project's Initial Study (refer to DREIR <i>Technical Appendix A</i>), adequate public services (such as police and fire protection) can be provided to the Project site. In addition, the proposed Project is generally less intense than the industrial uses that could be developed on the Project site in accordance with the existing IC land use zoning district designation applicable to the Project site. Therefore, the proposed Project would not be in conflict with this policy.
CI 11.12: Prior to approval of new development, ensure that adequate and reliable water supplies and conveyance systems will be available to support the development, consistent with coordination between land use planning and water system planning.	Water services are readily available and in close proximity to the Project site, as documented in the Project's Initial Study (refer to DREIR <i>Technical Appendix A</i>). Additionally, Crestline-Lake Arrowhead Water Agency (CLAWA) provided the Project Applicant with a will-serve letter dated April 28, 2017 indicating the agency can provide the Project with sufficient water supplies. Accordingly, the Project would not be in conflict with Policy C 11.12.



General Plan Policy	Project Consistency
CI 12.11: Prior to approval of new development, ensure that adequate and reliable wastewater systems will be available to support the development, consistent with coordination between land use planning and wastewater system planning	Infrastructure services, such as water, sewer, and storm drains are readily available and in close proximity to the Project site, as documented in the Project's Initial Study (refer to DREIR <i>Technical Appendix A</i>). Accordingly, the Project would not conflict with Policy CI 12.11.
CI 12.12: Cooperate with local wastewater/sewering authorities to monitor future development to ensure that development will proceed only when sufficient capacity or approved alternative wastewater treatment systems can be provided.	Infrastructures services, such as water, sewer, and storm drains are readily available and in close proximity to the Project site, as documented in the Project's Initial Study (refer to DREIR <i>Technical Appendix A</i>). Accordingly, the Project would not conflict with Policy CI 12.12.
CI 13.1: Utilize site-design, source-control, and treatment control best management practices (BMPs) on applicable projects, to achieve compliance with the County Municipal Stormwater NPDES Permit.	The Project proposes to include a 7,838-sq. ft. water quality bioretention basin and a 54,000-sq. ft. low impact development (LID) sports field that would serve as a BMPs for managing storm water. Additionally, the Project would be required to implement the storm water management requirements and BMPs identified in a Project-specific Water Quality Management Plan (WQMP) and the Project-specific drainage study (DREIR <i>Technical Appendix F</i>).
CI 16.3: Encourage development in areas that have adequate infrastructures for the provision of fire service, which include, but are not limited to, water systems capable of delivering appropriate fire flow, and transportation networks that can provide access for fire apparatus and other emergency response vehicles as well as provide efficient egress for evacuees.	Infrastructure services, such as water, sewer, and storm drains are readily available and in close proximity to the Project site, as documented in the Project's Initial Study (refer to DREIR <i>Technical Appendix A</i>). Additionally, as concluded in the Project's Initial Study (refer to DREIR <i>Technical Appendix A</i>), adequate public services (such as police and fire protection) can be provided to the Project site. In addition, the proposed Project is generally less intense than the industrial uses that could be developed on the Project site in accordance with the existing IC land use zoning district designation applicable to the Project site. Therefore, the proposed Project would not conflict with this policy.
<u>Circulation and Infrastructure Element Policies specific to the Mountain Planning Region</u>	
M/CI 1.1: The County shall ensure that all new development proposals do not degrade Levels of Service (LOS) on State Routes and Major Arterials below LOS C during non-peak hours or below LOS D during peak-hours in the Mountain Region.	As described in DREIR Subsection 3.I, <i>Transportation and Circulation</i> , with the installation of a traffic signal at the Project entrance and SR-18 and the installation of the off-site traffic signals partially funded by fair share contributions provided by the Project Applicant, the minimum levels of service



General Plan Policy	Project Consistency
	<p>(LOS) would be maintained on all study area intersections with the addition of Project-generated traffic. However, because the intersections that would be significantly impacted by Project traffic in the Existing Plus Project Scenario, Opening Year 2018 Scenario, Cumulative (2018) Scenario, and Year 2040 Scenario are under the jurisdiction of Caltrans, San Bernardino County cannot assure the construction of improvements to State Highway facilities that may be needed to improve traffic flows at the impacted intersections. Furthermore, Caltrans does not have a funding mechanism in place to allow development projects to contribute a fair-share payment to contribute to future improvements and off-set cumulatively considerable traffic impacts. Although Mitigation Measure MM 3.I-2 was identified in DREIR Subsection 3.I, <i>Transportation and Circulation</i>, requires the Project Applicant to make fair share fee contributions to Caltrans to fund improvements to State Highway facilities in the Project study area (in the event that Caltrans establishes a fair share funding program that is applicable to the Project), there is no assurance that planned improvements would be in place prior to the time that the Project begins to contribute traffic to the affected facilities. Accordingly, in the absence of such improvements, the proposed Project would contribute to non-Peak Hour and LOS deficiencies (below LOS D) during Project operation that would conflict with Policy M/CI 1.1 resulting in a cumulatively considerable significant and unavoidable impact.</p>



General Plan Policy	Project Consistency
M/CI 1.5: To the maximum extent possible, use alternatives to the construction of new traffic signals where they can be shown to benefit roadway capacity and are compatible with the character of the mountain region.	Due to the location of the new traffic signals along State Highways subject to Caltrans jurisdiction, no feasible alternatives are available to address the flow of traffic at the intersections included in the traffic study area.
<u>Conservation Element</u>	
CO 2.3: In addition to conditions of approval that may be required for specific future development proposals, the County shall establish long-term comprehensive plans for the County's role in the protection of native species because preservation and conservation of biological resources are statewide, Regional, and local issues that directly affect development rights. The conditions of approval of any land use application approved with the BR overlay district shall incorporate the mitigation measures identified in the report required by Section 82.13.030 (Application Requirements), to protect and preserve the habitats of the identified plants and/or animals.	Subsection 3.C, <i>Biological Resources</i> , of this DREIR identifies the mitigation measures identified in the Project-specific biological resources assessment (DREIR <i>Technical Appendix C</i>) to reduce the Project's direct impacts to biological resources to a level below significance. Accordingly, the Project would not conflict with Policy CO 2.3.
CO 3.2: Identify and protect important archaeological and historic cultural resources in all lands that involves disturbance of previously undisturbed ground.	The Project's Initial Study (DREIR <i>Technical Appendix A</i>) concluded that the Project-related impacts to cultural resources (includes archaeological and historic resources) would be less than significant. Therefore, the Project would not conflict with Policy CO 3.2.
CO 3.5 Ensure that important cultural resources are avoided or minimized to protect Native American beliefs and traditions.	The Project's Initial Study (DREIR <i>Technical Appendix A</i>) concluded that the Project-related impacts to cultural resources would be less than significant. Therefore, the Project would not conflict with Policy CO 3.2.



General Plan Policy	Project Consistency
<p>CO 4.1: Because developments can add to the wind hazard (due to increased dust, the removal of wind breaks, and other factors), the County will require either as mitigation measures in the appropriate environmental analysis required by the County for the development proposal or as conditions of approval if no environmental document is required, that developments in areas identified as susceptible to wind hazards to address site-specific analysis of:</p> <ul style="list-style-type: none">a. Grading restrictions and/or controls on the basis of soil types, topography or season.b. Landscaping methods, plant varieties, and scheduling to maximize successful revegetation.c. Dust-control measures during grading, heavy truck travel, and other dust generating activities.	<p>South Coast Air Quality Management District (SCAQMD) Rule 403 addresses blowing dust from construction sites and is applicable to the Project due to its potential to result in wind erosion during grading and construction activities. Accordingly, mandatory compliance with SCAQMD Rule 403, the Project would not conflict with Policy CO 4.1.</p>
<p>CO 4.4: Because congestion resulting from growth is expected to result in a significant increase in the air quality degradation, the County may manage growth by insuring the timely provision of infrastructure to serve new development.</p>	<p>Infrastructure services, such as water, sewer, and storm drains are readily available and in close proximity to the Project site, as documented in the Project's Initial Study (refer to DREIR <i>Technical Appendix A</i>). Additionally, as concluded in the Project's Initial Study (refer to DREIR <i>Technical Appendix A</i>), adequate public services (such as police and fire protection) can be provided to the Project site. In addition, the proposed Project is generally less intense than the industrial uses that could be developed on the Project site in accordance with the existing IC land use zoning district designation applicable to the Project site. Therefore, the proposed Project would not be in conflict with this policy.</p>
<p>CO 4.13: Reduce Greenhouse Gas (GHG) emissions within the County boundaries.</p>	<p>DREIR Subsection 3.J, <i>Greenhouse Gas Emissions</i>, evaluates Project-related GHG impacts. As concluded in Subsection 3.J, the Project would result in less-than-significant GHG impacts. Accordingly, the Project would not conflict with Policy CO 4.13.</p>



General Plan Policy	Project Consistency
<p>CO 5.4: Drainage courses will be kept in their natural condition to the greatest extent feasible to retain habitat, allow some recharge of groundwater basins and resultant savings. The feasibility of retaining features of existing drainage courses will be determined by evaluating the engineering feasibility and overall costs of the improvements to the drainage courses balanced with the extent of the retention of existing habitat and recharge potential.</p>	<p>As documented in the Rimforest Storm Drain Project Final DREIR (SCH No. 2015051070), the Rimforest Storm Drain Project will be carried out by the San Bernardino County Flood Control District (SBCFCD), and will physically impact approximately 0.10 acres of the Project site, primarily around the existing on-site drainage course that traverses the southwest portion of the Project site. The Rimforest Storm Drain Project will convey storm water flows from off-site areas north of the Project site through the Project site and ultimately connect to a future improved SBCFCD storm drain facility within SR-18. As such, the existing on-site natural drainage course will be permanently impacted by the Rimforest Storm Drain Project. Accordingly, the Project would not conflict with Policy CO 5.4.</p>



General Plan Policy	Project Consistency
<p>CO 8.6: Fossil fuels combustion contributes to poor air quality. Therefore, alternative energy production and conservation will be required, as follows:</p> <ul style="list-style-type: none">a. New developments will be encouraged to incorporate the most energy-efficient technologies that reduce energy waste by weatherization, insulation, efficient appliances, solar energy systems, reduced energy demand, efficient space cooling and heating, water heating, and electricity generation.b. All new subdivisions for which a tentative map is required will provide, to the extent feasible, for future natural heating or cooling opportunities in the subdivision. This can be accomplished by design of lot size and configuration for heating or cooling from solar exposure or shade and breezes, respectively.c. For all new divisions of land for which a tentative map is required, a condition of approval will be the dedication of easements, for the purpose of assuring solar access, across adjacent parcels or units.	<p>Part 11 of the Title 24 is referred to as the California Green Building Standards Code (CALGreen Code), the most recent version of which became effective on January 1, 2017. The proposed Project is subject to the CALGreen Code Title 24 building energy efficiency requirements that require upgraded windows, insulation, lighting, ventilation systems, and other features that reduce energy consumption. Accordingly, through compliance with CALGreen, the Project would incorporate energy efficient technologies into its design, and therefore would not conflict with Policy CO 8.6 or Policy CO 8.8.</p>
<p>CO 8.8: Promote energy-efficient design features, including appropriate site orientation, use of lighter color roofing and building materials, and use of deciduous shade trees and windbreak trees to reduce fuel consumption for heating and cooling.</p>	
<p><u>Conservation Element Policies specific to the Mountain Planning Region</u></p>	



General Plan Policy	Project Consistency
M/CO 1.2: Protect scenic vistas by minimizing ridgeline development that would substantially detract from the scenic quality of major ridgeline viewsheds.	The County of San Bernardino General Plan does not designate any scenic vistas. Travelers along the segment of SR-18 located immediately south of the Project site are afforded views of the San Bernardino National Forest, portions of the San Bernardino and San Gabriel valleys, and the crest of the Santa Ana Mountain Range to the south. Views of the Project site from SR-18 are characterized by tree cover and a small steep hillside on the southeast part of the site. The Project would change views of the Project site from SR-18 from its existing appearance as forested slopes to a partially developed condition featuring the church campus, a sports field, parking areas, and landscaping. The Project would not alter a major ridgeline viewshed, and would not detract from the existing views of the San Bernardino National Forest, San Bernardino and San Gabriel valleys, and Santa Ana Mountain Range that are available looking southward from SR-18. Accordingly, the Project would not conflict with Policy M/CO 1.2.
M/CO 1.4: Designate and protect unique habitats supporting rare and endangered species.	As discussed in DREIR Subsection 3.B, <i>Biological Resources</i> , with implementation of the required mitigation measures, the Project would result in less-than-significant direct impacts to sensitive species and habitats and jurisdictional features. Additionally, mandatory compliance with Section 83.10.070, <i>Landscape Standards</i> , of the San Bernardino County Development Code would require the Project to implement landscaping consisting of native and drought tolerant plant materials. Furthermore, pursuant to Section 83.10.070, <i>Regional Landscaping Standards</i> , of the San Bernardino County Development Code, the Project would be required to install fire-resistant plant materials. Accordingly, the Project would not conflict with these policies.
M/CO 1.7: Encourage conservation and sound management of the mountain forest character and natural resources, including water, streams, vegetation, soils and wildlife. Require the planting of native or drought-tolerant cultivar species, capable of surviving the mountain environment and climate.	
M/CO 2.3: Require the re-vegetation of any graded surface with suitable native drought and fire-resistant planting to minimize erosion.	
M/CO 2.7: Through the development review process, require replanting of ground cover in denuded areas with vegetation, either indigenous to the area or compatible with the montane climate and soil characteristics.	



General Plan Policy	Project Consistency
M/CO 2.8: When feasible, require developers through the development review process to substantially maintain existing percolation and surface water runoff on site.	<p>The Project would develop the Project site with a network of drainage lines and water quality catch basins to accommodate storm water runoff flows. As depicted on Figure 2-7, <i>Proposed Site Plan</i>, a bioretention basin would be developed on the south-central portion of the Project site to capture storm water runoff from the northern and eastern portions of the Project site. The bioretention basin is designed to slow and treat on-site storm water runoff before it is discharged to the SBCFCD storm drain system. The bioretention basin would not consist of exposed concrete. Additionally, the proposed on-site landscaped areas and LID sports field proposed on the southwest portion of the Project site are designed to allow infiltrate storm water as a part of the Project's drainage plan. As shown on Figure 2-7, the Project provides for a 40-foot storm drain easement for the SBCFCD that would traverse the southwest portion of the Project site in a northeasterly to southwesterly orientation. The 40-foot SBCFCD easement would accommodate the on-site subsurface flood control improvements to be constructed by San Bernardino County as part of SBCFCD's Rimforest Storm Drain project, which would convey storm water flows from off-site areas north of the Project site through the Project site and ultimately connect to a future improved SBCFCD storm drain facility within SR-18. Because the proposed Project's drainage plan is dependent on connecting to facilities that will be installed as part of San Bernardino County's Rimforest Storm Drain Project, the proposed Church of the Woods Project is proposed to be constructed concurrent with or following installation of these regional drainage improvements. Additionally, the Project would preserve approximately 50 % of the Project site as natural open space and would cluster development on the southern part of the Project site. Accordingly, the Project would not conflict with these policies.</p>
M/CO 3.1: Utilize open space and drainage easements as well as clustering of new development as stream preservation tools.	
M/CO 3.2: Require naturalistic drainage improvements where modifications to the natural streamway are required.	
M/CO 3.3: Prohibit exposed concrete drainage structures. Acceptable designs include combinations of earthen landscaped swales, rock rip-rap lined channels or rock-lined concrete channels. Property owners must provide for the maintenance of underground drainage structures.	
M/CO 3.6: Minimize the runoff of surface water and establish controls for soil erosion and sedimentation through the following policies: a. Through the development review process, require replanting of ground cover in denuded areas with revegetation, either indigenous to the area or compatible with the climate and soil characteristics of the region. b. When development occurs, provide for the retention of natural drainage channels and capacity of the site where feasible. c. When feasible, require developers, through the development review process, to maintain existing percolation and surface water runoff rate by discouraging the paving of large surface areas.	
M/CO 4.1: Identify and protect significant cultural resources from damage or destruction.	<p>As concluded in the Project's Initial Study (DREIR <i>Technical Appendix A</i>), the Project would not result in substantial adverse effects to cultural resources. Accordingly, the Project would not conflict with Policy M/CO 4.1.</p>



General Plan Policy	Project Consistency
M/CO 5.4: All outdoor lighting, including street lighting, shall be provided in accordance with the Night Sky Protection Ordinance and shall only be provided as necessary to meet safety standards.	Outdoor lighting at the site shall be designed in accordance with Chapter 83.07, <i>Glare and Outdoor Lighting</i> , of the San Bernardino County Development Code, specifically § 83.07.040, <i>Glare and Outdoor Lighting - Mountain and Desert Regions</i> . Mandatory compliance with these provisions would ensure the Project comports with the requirements of the Night Sky Protection Ordinance. Accordingly, the Project would not conflict with Policy M/CO 5.4.
<u>Open Space Element</u>	
OS 2.7: Monitor all dedicated public trails and/or easements on a continuing basis and maintain an up-to-date map of all existing and proposed dedicated public trail easements on the Open Space Overlay Map. Existing trail easements or alignments will be mapped in their correct positions; proposed alignments will be mapped in general locations. The Open Space Overlay Map will be reviewed during consideration of applications for permits or development approvals to ensure that new development does not result in loss of existing or potential public use of dedicated easements.	The Open Space Overlay Map does not depict any existing dedicated trail easements on the Project site (San Bernardino County, 2007d). Accordingly, the Project would not conflict with Policy OS 2.7.
OS 5.2: Define the scenic corridor on either side of the designated route, measured from the outside edge of the right-of-way, trail, or path. Development along scenic corridors will be required to demonstrate through visual analysis that proposed improvements are compatible with the scenic qualities present.	The Open Space Overlay Map depicts the segment of SR-18 located to the immediate south of the Project site as a County Designated Scenic Route (San Bernardino County, 2007d). A visual analysis of the Project is included in DREIR Subsection 3.A, <i>Aesthetics</i> , and concluded that the Project would not result in a substantially degrade the existing visual character or quality of the Project site and its surroundings. Accordingly, the Project would not conflict with these policies.
OS 5.3: The County desires to retain the scenic character of visually important roadways throughout the County. A “scenic route” is a roadway that has scenic vistas and other scenic and aesthetic qualities that over time have been found to add beauty to the County. Therefore, the County designates the following routes as scenic highways and applies all applicable policies to development on these routes (see Figures 2-4A through 2-4C of the Circulation and Infrastructure Background Report):	



General Plan Policy	Project Consistency
<p>Mountain Region:</p> <ul style="list-style-type: none">a. Crest Forest Drive from State Route 18 west to Sawpit Canyon Road.b. Dart Canyon Road.c. Devil's Canyon Road.d. Grass Valley Road.e. Green Valley Lake Road/101 Mile Drive.f. Kuffel Canyon Road.g. Lake Drive from Knapps Cutoff northeast to Dart Canyon Road.h. Lake Gregory Drive.i. Lone Pine Canyon Road.j. Mt. Baldy Road from Los Angeles County line northeast to Mt. Baldy.k. North Road from Lake Gregory Drive northeast to State Route 189.l. Oak Glen Road.m. Old Waterman Canyon Roadn. Playground Drive.o. Rim of the World Drive from Green Valley Lake Road to State Route 38. <p>Multiple Regions</p>	



General Plan Policy	Project Consistency
<ul style="list-style-type: none">a. Baldwin Lake Road from State Route 18 southeast to Pioneer Town Road; continuing east on Pioneer Town Road to Burns Canyon Road; continuing southeast on Burns Canyon Road to Rimrock Road; and continuing southeast on Rimrock Road to Pipes Canyon Road.b. Coxey Truck Trail from Bowen Ranch Road southeast to Rim of the World Drive.c. Interstate 15 from the junction with Interstate 215 northeast to the Nevada state line, excepting those areas within the Barstow Planning Area and the community of Baker where there is commercial/industrial development; those portions within the Yermo area from Ghost Town Road to the East Yermo Road overcrossing on the south side only and from First Street to the East Yermo Road overcrossing on the north side; and all incorporated areas.d. State Route 18 from San Bernardino northeast to the City of Big Bear Lake; from Big Bear Lake northwest to Apple Valley; within the Victorville sphere of influence; and from Victorville and Adelanto to the Los Angeles County line.e. State Route 38 from Garnet St. in Mentone northeast to Big Bear Damf. State Route 138 from Crestline cutoff at State Route 18 northwest to Los Angeles County line.g. State Route 173 from State Route 18 northwest to Hesperia.	
OS 7.5 Require that natural landform and ridgelines be preserved by using the following measures:	The Project would entail grading the existing hill located on the eastern portion of the Project site; however, the Project would also preserve approximately 50%



General Plan Policy	Project Consistency
<p>a. Keep cuts and fills to an absolute minimum during the development of the area.</p> <p>b. Require the grading contours that do occur to blend with the natural contours on site or to look like contours that would naturally occur.</p> <p>c. Encourage the use of custom foundations in order to minimize disruption of the natural landform.</p> <p>d. Require that units located in the hillsides be so situated that roof lines will blend with and not detract from the natural ridge outline.</p>	<p>of the site as natural open space, and preserve the existing natural slope on the southeast portion of the site. Additionally, grading activities related to the Project would be required to adhere to the provisions in Chapter 83.08, <i>Hillside Grading Standards</i>, of the San Bernardino County Development Code. As described in DREIR Subsection 3.D, <i>Geology and Soils</i>, the Project site would also be subject to the requirements of Chapter 82.13, <i>Fire Safety (FS) Overlay</i>, of the County Development Code, which imposes applicable development requirements related to erosion control and fire safety (i.e., fuel modification). The Project would also be required to implement the BMPs and other storm water management measures from the Project-specific WQMP, SWPPP, and NPDES permit, which would ensure that the Project implementation does not result in substantial degradation of water quality. Additionally, as discussed in DREIR Subsection 3.A, <i>Aesthetics</i>, the Project would be designed to be visually compatible with the mountainous residential setting, and would not substantially degrade the existing visual character or quality of the Project site and its surroundings. The Project would be required to comply with Chapter 88.01 of the County Development Code, which establishes requirements and guidelines for the management of plant resources and requires a Tree or Plant Removal Permit when a development proposes to remove trees and vegetation from the Project site. Based on the Project’s preservation of approximately 50 % of natural open space at the site, its avoidance of the prominent natural slope on the southeast part of the site, and its required compliance with the Project-specific WQMP, SWPPP, NPDES, and the provisions of Chapter 83.08, 82.13, and 88.01 of the County Development Code, it would not conflict with these policies.</p>
<p>OS 7.6 Require that hillside development be compatible with natural features and the ability to develop the site in a manner that preserves the integrity and character of the hillside environment, including but not limited to, consideration of terrain, landform, access needs, fire and erosion hazards, watershed and flood factors, tree preservation, and scenic amenities and quality.</p>	
<p><u>Open Space Element Policies specific to the Mountain Planning Region</u></p>	



General Plan Policy	Project Consistency
M/OS 2.1 Utilize setbacks, building coverage, the Planned Development concepts and other measures to protect the forest environment.	The Project has been designed to comply with the site planning requirements (i.e., setbacks and building coverage) applicable to the IC land use zoning district, as specified in Table 82-20A of the San Bernardino County Development Code (San Bernardino County, 2018, Table 82-20A). Accordingly, the Project would not conflict with Policy M/OS 2.1.
M/OS 2.6 Where appropriate, require pedestrian walkways in commercial, industrial and major multiple family residential developments.	The Project would provide internal sidewalks throughout the Project site to facilitate efficient pedestrian and bicycle circulation. Therefore, the Project would not conflict with these policies.
M/OS 2.7 Provide pedestrian linkages between adjacent commercial areas and adjoining residential areas, to encourage foot traffic and reduce automobile trips.	
<u>Safety Element</u>	
S 3.3 Minimize the fire hazard posed by expanding development in wildland/urban intermix areas.	As shown on Figure 2-7, <i>Proposed Site Plan</i> , the Project incorporates fuel modification zones that comply with the requirements of San Bernardino County Development Code Sections 82.13.060, <i>FS1</i> , <i>FS2</i> , and <i>FS3 Development Standards</i> , and 82.13.070, <i>FS1 Additional Development Standards</i> . Accordingly, the Project would not conflict with Policy S 3.3.
S 4.2 Apply the provisions of the Revised Erosion and Sediment Control Ordinance countywide.	The Project would be required to comply with the erosion control requirements and measures of the following: A Project-specific Soil Erosion and Sediment Control Plan prepared pursuant to Section 82.13.080 of the San Bernardino County Development Code, the Lahontan Basin Plan, the Santa Ana Basin Plan, a Project-specific SWPPP, a Project-specific Water Quality Management Plan (WQMP), NPDES permit, and SCAQMD Rule 403 – Fugitive Dust. Compliance with the requirements of these regulations and documents would ensure that the Project would not conflict with Policy S 4.2.
S 4.3 Tailor grading, land clearance, and grazing to prevent unnatural erosion in erosion susceptible areas.	The Project’s grading activities would be required to adhere to the provisions in Chapter 83.08, <i>Hillside Grading Standards</i> , of the San Bernardino County Development Code. Additionally, the Project site would be subject to the requirements of Chapter 82.13, <i>Fire Safety (FS) Overlay</i> , of the County Development Code, which imposes applicable development requirements



General Plan Policy	Project Consistency
	related to erosion control and fire safety (i.e., fuel modification). The Project would also be required to implement the BMPs and other erosion control measures from the Project-specific WQMP, SWPPP, and NPDES permit, which would ensure that the Project implementation does not result in substantial erosion. Accordingly, the Project would not conflict with Policy S 4.3.
S 5.5 Require specific hydrology and hydraulic studies for development proposals to avoid spot flooding from small streams or unmapped areas adjacent to mapped flood areas.	A Drainage Study was prepared for the Project, which is included as DREIR <i>Technical Appendix F</i> . Accordingly, the Project would not conflict with Policy S 5.5.
S 5.6 Prevent flood hazard resulting from drainage from adjacent development.	As indicated in DREIR Subsection 3.F and in the Drainage Study included as DREIR Technical Appendix F, the proposed Project has been designed to accommodate stormwater flows in a manner that would avoid the potential for flood hazards affecting off-site properties. Accordingly, the Project would not conflict with Policy S 5.6.
S 6.1 Require development on hillsides to be sited in such a manner that minimizes the extent of topographic alteration required to minimize erosion, to maintain slope stability, and to reduce the potential for offsite sediment transport.	The Project's grading activities would be required to adhere to the provisions in Chapter 83.08, <i>Hillside Grading Standards</i> , of the San Bernardino County Development Code. Additionally, Mitigation Measures MM 3.D-1 and MM 3.D-2 have been imposed on the Project to ensure that a Project-specific geotechnical investigation be prepared, and that all remedial measures from the geotechnical investigation are implemented. As previously stated, the Project would also be required to implement the soil erosion control measures from the Project-specific WQMP, SWPPP, and NPDES permit. Compliance with these provisions would ensure that the Project would not conflict with these policies pertaining to erosion, slope stability, and landslide hazards.
S 7.6 Protect life and property from risks resulting from landslide, especially in San Bernardino and San Gabriel Mountains that have high landslide potential.	
S 9.2 Ensure that future developments have no less than two points of access for emergency evacuation and for emergency vehicles, in the event of wildland fires and other natural disasters.	As shown on Figure 2-7, <i>Proposed Site Plan</i> , the Project proposes to construct two (2) driveways that would provide access to the Project site from SR-18, one of which would be limited to emergency vehicles only. Accordingly, the Project would not conflict with Policy S 9.2.
<u>Safety Element Policies specific to the Mountain Planning Region</u>	
M/S 1.1 Designate the following roads and highways as evacuation routes in the in the Mountain Region: State Highways 2, 18, 38, 138, 189 and 330, and Mount Baldy Road.	SR-18 is located to the immediate south of the Project site, and is designated as an evacuation route. The Project would not temporarily or permanently impede



General Plan Policy	Project Consistency
	the use of SR-18 as an evacuation route. Accordingly, the Project would not conflict with Policy M/S 1.1.
M/S 1.2 Encourage expansion or development of fuel breaks adjacent to residential populated areas within the Mountain Region in a manner consistent with the intent of the General Plan.	As shown on Figure 2-7, <i>Proposed Site Plan</i> , the Project incorporates fuel modification zones that comply with the requirements of San Bernardino County Development Code Sections 82.13.060, <i>FS1</i> , <i>FS2</i> , and <i>FS3 Development Standards</i> , and 82.13.070, <i>FS1 Additional Development Standards</i> . Accordingly, the Project would not conflict with Policy M/S 1.2.



2. Lake Arrowhead Community Plan

A consistency analysis of the proposed Project to the relevant policies of the Lake Arrowhead Community Plan is presented in Table 3.G-2, *Relationship of Project to Relevant Lake Arrowhead Community Plan Policies*. As described in Table 3.G-2, the proposed Project would conflict with Lake Arrowhead Community Plan Policy LA/CI 1.1 related to levels of service on Project area roadways. The Project would not conflict with any other policies in the Lake Arrowhead Community Plan. Accordingly, the Project would result in a significant land use impact due to the resulting environmental effect of conflicting with the Lake Arrowhead Community Plan Policy LA/CI 1.1.

3. County of San Bernardino Development Code – Community Industrial (IC) District

The Project's proposed lot size, setbacks, FAR, lot coverage, and building heights would conform to the development standards applicable to the IC District within the Mountain Region. However, the Project's use as a church facility within the IC District would require the County to approve a CUP. Pursuant to Section 85.06.040 of the San Bernardino County Development Code, prior to the County's approval of the proposed CUP, findings must be made by the Planning Commission verifying the adequacy of the site for the uses proposed; the adequacy of site access; the lack of substantial adverse effects on abutting properties; consistency with the goals, maps, policies, and standards of the General Plan and any applicable community or specific plan; the existence or availability of supporting infrastructure; and that the design of the site has considered the use of solar energy systems and passive or natural heating and cooling opportunities (San Bernardino County, 2018, Section 85.06.040). As demonstrated in Table 3.G-1, *San Bernardino General Plan Consistency*, and Table 3.G-2, *Relationship of Project to Relevant Lake Arrowhead Community Plan Policies*, the proposed Project would be consistent with the policies of the General Plan and Lake Arrowhead Community Plan, respectively.



Table 3.G-2 Relationship of Project to Relevant Lake Arrowhead Community Plan Policies

Relevant Goal or Policy	Relationship to Project
<u>Land Use</u>	
LA/LU 1: Retain the existing resort-oriented mountain character of the community.	The proposed Project would preserve approximately 50 % of the site as natural open space and would be less intensive than the industrial uses permitted within the site's applicable IC District land use zoning designation. Furthermore, the proposed church use is a permitted use within the IC District, subject to the County's approval of the proposed CUP. Therefore, the proposed Project would not conflict with this policy.
LA/LU 1.5: All architecture and outside facades of commercial structures shall be in keeping with the mountain character. Natural woods and masonry shall be used as much as practicable, and shall be reviewed for conformance during the Land Use Services Conditional Use Permit approval process.	The proposed Project would utilize architectural treatments that blend in with and complement the surrounding natural environment. Furthermore, as part of the Conditional Use Permit approval process pursuant to Section 85.06.030 of the San Bernardino County Development Code, the County would review the design of the Project as shown in the architectural plans and landscape plans to ensure that the design of the Project complements the mountainous character of the surrounding area. Accordingly, the Project would not conflict with Policy LA/LU 1.5.
<u>Circulation and Infrastructure</u>	
LA/CI 1: Ensure a safe and effective transportation system that provides adequate traffic movement while preserving the mountain character of the community.	As analyzed in Section 3.I, <i>Transportation and Circulation</i> , adequate traffic movement would be maintained with the installation of a traffic signal at the Project entrance and SR-18 and fair share contribution to the identified off-site intersection improvements, which are a part of a Countywide Congestion Management Program. Accordingly, the Project would be in substantial conformance with this goal.



Relevant Goal or Policy	Relationship to Project
LA/CI 1.1: Ensure that all new development proposals do not degrade Levels of Service (LOS) on State Routes and Major Arterials below LOS “C” during non-peak hours or below LOS “D” during peak-hours.	As described in DREIR Subsection 3.I, <i>Transportation and Circulation</i> , with the installation of a traffic signal at the Project entrance and SR-18 and the installation of off-site traffic signals partially funded by fair share contribution to the identified off-site intersection improvements, the minimum levels of service (LOS) would be maintained on all study area intersections with the addition of Project-generated traffic. However, because the intersections that would be significantly impacted by Project traffic in the Existing Plus Project Scenario, Opening Year 2018 Scenario, Cumulative (2018) Scenario, and Year 2040 Scenario are under the jurisdiction of Caltrans, San Bernardino County cannot assure the construction of improvements to State Highway facilities that may be needed to improve traffic flows at the impacted intersections. Furthermore, Caltrans does not have a funding mechanism in place to allow development projects to contribute a fair-share payment to contribute to future improvements and off-set cumulatively considerable traffic impacts. Although Mitigation Measure MM 3.I-2 was identified in DREIR Subsection 3.I, <i>Transportation and Circulation</i> , requires the Project Applicant to make fair share fee contributions to Caltrans to fund improvements to State Highway facilities in the Project study area (in the event that Caltrans establishes a fair share funding program that is applicable to the Project), there is no assurance that planned improvements would be in place prior to the time that the Project begins to contribute traffic to the affected facilities. Accordingly, in the absence of such improvements, the proposed Project would contribute to non-Peak Hour and LOS deficiencies (below LOS D) during Project operation that would conflict with Policy LA/CI 1.1 resulting in a cumulatively considerable significant and unavoidable impact.
LA/CI 1.7: Provide access control, traffic system management and other improvements on the roadway system within the plan area in keeping with the scenic sensitivity of	As analyzed in Section 3.I, <i>Transportation and Circulation</i> , with the installation of a traffic signal at the Project entrance and Highway 18 and the installation of off-site traffic signals partially funded by fair share contribution to the identified



Relevant Goal or Policy	Relationship to Project
the community plan area. One method this can be accomplished by is, to the maximum extent possible, use alternatives to the construction of new traffic signals where they can be shown to benefit roadway capacity and are compatible with the mountain character of the community.	off-site intersection improvements, adequate levels of service on local roadways would be maintained. As the study area intersections that would be affected by the proposed Project would consist of State highways that are subject to Caltrans jurisdiction, alternatives to the construction of new traffic signals are not feasible. Accordingly, the proposed Project substantially conforms with this policy.
LA/CI 1.8: Preserve the status of Kuffel Canyon, Grass Valley Road, SR-173 and SR-18 as County Scenic Routes, and ensure protection of their natural features through the following methods: A. Require compliance with the provisions of the Open Space Overlay. B. Support hillside preservation regulations that will include standards for hillside development to control densities, allowable cut and fill heights, soil and slope stability, grading and blending of contours, structural relationships, building foundations, and the like.	The Open Space Overlay Map depicts the segment of SR-18 located to the immediate south of the Project site as a County Designated Scenic Route (San Bernardino County, 2007d). A visual analysis of the Project is included in DREIR Subsection 3.A, <i>Aesthetics</i> , and concluded that the Project would not result in a substantially degrade the existing visual character or quality of the Project site and its surroundings. Additionally, grading activities related to the Project would be required to adhere to the provisions in Chapter 83.08, <i>Hillside Grading Standards</i> , of the San Bernardino County Development Code. Accordingly, the Project would not conflict with Policy LA/CI 1.8.
LA/CI 1.11: Design road sections for mountain roads to be flexible in terms of required right of way widths and roadway widths, however, existing two-lane roads should be maintained. Road widenings should be limited to safety type improvements and those that would facilitate flow such as turning lanes, passing lanes, intersection widenings and shoulder widenings.	The proposed Project would install an access driveway along the Project frontage with SR-18 that would include a signalized intersection that would provide full-access into and out of the Project site. The Project would also widen SR-18 for approximately 300 feet easterly and westerly of the Project driveway to include an eastbound left-turn lane and westbound deceleration/acceleration lane. Additionally, an emergency access driveway would be installed along the Project's frontage with SR-18 to the east of the main Project driveway. The Project improvements would be designed in accordance with all applicable design and safety standards required by adopted fire codes, safety codes, and building codes established by the County's Engineering and Fire Departments as well as Caltrans. Accordingly, the Project would not conflict with Policy LA/CI 1.11.
LA/CI 1.12: Require a traffic impact analysis report to identify impacts and mitigation measures for projects that may result in potentially significant impacts and limit new construction	A Project-specific Traffic Impact Analysis was prepared to evaluate the Project's impacts on off-site intersections and recommend circulation improvements at any intersection which operates at an unsatisfactory level of



Relevant Goal or Policy	Relationship to Project
which would require significant improvements to the existing road system in order to handle project ingress, egress and traffic volumes until such time that the required improvements are completed. Significant improvements include anything other than additional turn lanes, transition lanes and stop signs.	service. The TIA is included as DREIR <i>Technical Appendix H</i> . Therefore, the Project would not conflict with Policy LA/CI 1.12.
LA/CI 1.13: All other methods of traffic control shall be considered before adding a traffic light within the community plan area. The County shall coordinate with Caltrans to implement this policy on State Highways within the plan area.	As analyzed in Section 3.I, <i>Transportation and Circulation</i> , with the installation of a traffic signal at the Project entrance and Highway 18 and fair share contribution to the identified off-site intersection improvements, adequate levels of service on local roadways would be maintained. As the study area intersections that would be affected by the proposed Project would consist of State highways that are subject to Caltrans jurisdiction, alternatives to the construction of new traffic signals are not feasible. Accordingly, the proposed Project substantially conforms with this policy.
LA/CI 5.1 Through the development review process, permit new development only when adequate water supply exists or can be assured.	Water services are readily available and in close proximity to the Project site, as documented in the Project's Initial Study (refer to DREIR <i>Technical Appendix A</i>). Additionally, CLAWA provided the Project Applicant with a will-serve letter dated April 28, 2017 indicating the agency can provide the Project with sufficient water supplies. Accordingly, the Project would not be in conflict with Policy LA/CI 5.1.
LA/CI 5.5 Ensure that the required infrastructure is in place prior to the occupancy of any new development project.	The Project would connect to the existing utilities in SR-18 and Daley Canyon Road, and would construct internal roadways and two vehicular access points along SR-18. As discussed in the Initial Study for the Project (refer to DREIR <i>Technical Appendix A</i>), the existing utility infrastructure (water, sewer, gas, electricity, storm drains, and solid waste disposal) that would serve the Project has sufficient capacity and availability to serve the Project. Accordingly, the Project would not conflict with Policy LA/CI 5.5.
LA/CI 7 Ensure that infrastructure improvements are visually and physically compatible with the natural environment and mountain character of the community.	Utility and infrastructure connections constructed to serve the Project would be installed within the Project site and underground. However, construction activities associated with the installation of these utilities would have temporary visual and physical impacts on the area. However, due to the intervening topography and tree cover, views of construction activities from surrounding



Relevant Goal or Policy	Relationship to Project
	areas would be limited. Accordingly, the Project would not conflict with Policy LA/CI 7.
LA/CI 7.2 Mitigate the visual impacts of facilities, structures, utilities and mechanical installations through the development of appropriate screening and location criteria.	The Project has been designed to be compatible with the character and scale of the surrounding residential alpine environment; would comply with the development standards applicable within the IC District; and would preserve approximately 50 % of the Project site as natural open space. Additionally, prior to approval of the CUP proposed by the Project, the San Bernardino County Planning Commission would review the Project's design consistent with the provisions of Section 85.06.030 of the San Bernardino County Development Code. Accordingly, the facilities, structures, utilities and mechanical installations proposed by the Project would be properly sited and screened in accordance with all applicable County regulations.
LA/CI 7.3 Coordinate with service providers to relocate existing overhead utilities underground along existing roadways and require underground utilities in new developments.	The Project site does not contain any overhead utilities. All of the utilities that would be installed at the Project site would be subsurface (except for a portion of the storm drain features that would be aboveground and therefore visible). Accordingly, the Project would not conflict with LA/CI 7.3.
<u>Conservation</u>	
LA/CO 1. Preserve the unique environmental features of Lake Arrowhead including native wildlife, vegetation, and scenic vistas.	The Project's potential impacts to aesthetics and biological resources are evaluated in DREIR Subsections 3.A, <i>Aesthetics</i> , and 3.C, <i>Biological Resources</i> , respectively. It was determined that the Project would result in less-than-significant impacts to aesthetics, and would result in less-than-significant direct impacts to biological resources with implementation of the required mitigation measures. Accordingly, the Project would not conflict with Policy LA/CO 1.
LA/CO 1.1 The following areas are recognized as important open space areas that provide for wildlife movement and other important linkage values. Projects shall be designed to minimize impacts to these corridors. A. Grass Valley Creek Wildlife Corridor B. Strawberry Creek Wildlife Corridor	The Project's potential to impact wildlife corridors is fully evaluated in DREIR Subsection 3.C and addressed in the Habitat Assessment included in Technical Appendix C. As indicated in this analysis, the proposed Project would result in less than significant impacts to wildlife corridors. Accordingly, the proposed Project would be consistent with Policy LA/CO 1.1.



Relevant Goal or Policy	Relationship to Project
C. Dispersion Corridor - between Lake Arrowhead and Running Springs and south of Highway 18.	
LA/CO 1.3 Protect scenic vistas by minimizing ridgeline development that would substantially detract from the scenic quality of major ridgeline viewsheds.	The Project would preserve approximately 50 % of the site as natural open space, and preserve the existing natural slope on the southeast portion of the site. Additionally, grading activities related to the Project would be required to adhere to the provisions in Chapter 83.08, <i>Hillside Grading Standards</i> , of the San Bernardino County Development Code. Furthermore, as discussed in DREIR Subsection 3.A, <i>Aesthetics</i> , the Project would be designed to be visually compatible with the mountainous residential setting, and would not substantially degrade the existing visual character or quality of the Project site and its surroundings. Based on the Project's preservation of approximately 50 % of natural open space at the site, its avoidance of the prominent natural slope on the southeast part of the site, and its required compliance with the provisions of Chapter 83.08 of the County Development Code, it would not conflict with Policy LA/CO 1.3.
LA/CO 2: Maintain the health and vigor of the forest environment.	The Project would preserve approximately 50 % of the site as natural open space. Additionally, the Project's impacts to biological resources are evaluated in DREIR Subsection 3.C, <i>Biological Resources</i> . As concluded in Subsection 3.C, <i>Biological Resources</i> , implementation of the required mitigation measures and compliance with applicable regulatory requirements would ensure that the Project's impacts to biological resources (i.e. vegetation and wildlife) would be less than significant. Accordingly, the Project would not conflict with Policy LA/CO 2.



Relevant Goal or Policy	Relationship to Project
LA/CO 2.3: Require the re-vegetation of any graded surface with suitable native drought and fire resistant planting to minimize erosion.	The proposed Project would conform with this policy since development would be subject to the development standards applicable to development within the Fire Safety Overlay 1, as contained in San Bernardino County Development Code Sections 82.13.060, <i>FS1</i> , <i>FS2</i> , and <i>FS3 Development Standards</i> , and 82.13.070, <i>FS1 Additional Development Standards</i> . The Project would also be subject to the provisions within Section 83.10.070, <i>Landscape Standards</i> , of the San Bernardino County Development Code, which would require the Project to implement landscaping consisting of native and drought tolerant plant materials. Furthermore, pursuant to Section 83.10.070, <i>Regional Landscaping Standards</i> , of the San Bernardino County Development Code, the Project would be required to install fire-resistant plant materials. Accordingly, the Project would not conflict with Policy LA/CO 2.3.
LA/CO 2.5 Require an approved landscape plan as part of the location and development plan review and approval process for all proposed residential, commercial and industrial projects. Projects within the LACSD service area shall conform to LACSD-adopted mandatory landscape standards.	Prior to approval of the CUP proposed by the Project, the landscape plan would be reviewed by the County, consistent with the provisions of Section 85.06.030 of the San Bernardino County Development Code. Since the Project site is located within the jurisdiction of the Lake Arrowhead Community Services District (LACSD), the Project's landscape plan would be required to comply with the applicable requirements established by LACSD. Accordingly, the Project would not conflict with Policy LA/CO 2.5.
LA/CO 3. Protect streambeds and creeks from encroachment or development that detracts from their beauty.	The proposed Project would impact a small drainage feature in the southwestern portion of the Project in the event that the Project is constructed prior to the implementation of the Rimforest Flood Control Project. The drainage feature is a small tributary to Little Bear Creek and Lake Arrowhead. However, this drainage feature would be impacted by development during the implementation of the Rimforest Flood Control Project even in the absence of the proposed Project. Accordingly, the implementation of improvements within the portion of the drainage feature that occurs within the Project site would not conflict with Policy LA/CO 3.



Relevant Goal or Policy	Relationship to Project
LA/CO 3.1 Utilize open space and drainage easements as well as clustering of new development as stream preservation tools.	The proposed Project would impact a small drainage feature in the southwestern portion of the Project in the event that the Project is constructed prior to the implementation of the Rimforest Flood Control Project. The drainage feature is a small tributary to Little Bear Creek and Lake Arrowhead. However, this drainage feature would be impacted by development during the implementation of the Rimforest Flood Control Project even in the absence of the proposed Project. Accordingly, the implementation of improvements within the portion of the drainage feature that occurs within the Project site would not conflict with Policy LA/CO 3.1
LA/CO 3.2 Require naturalistic drainage improvements where modifications to the natural streamway are required.	The Project would develop the site with a network of drainage lines and water quality catch basins to accommodate storm water runoff flows. As depicted on Figure 2-7, <i>Proposed Site Plan</i> , a bioretention basin would be developed on the south-central portion of the Project site to capture storm water runoff from the northern and eastern portions of the Project site. The bioretention basin is designed to slow and treat on-site storm water runoff before it is discharged to the SBCFCD storm drain system. Additionally, the proposed on-site landscaped areas and LID sports field proposed on the southwest portion of the Project site are designed to allow infiltrate storm water as a part of the Project's drainage plan. In the event that the proposed Project would develop the portion of the small on-site drainage prior, the Project would be implementing a component of the approved Rimforest Flood Control Project. Accordingly, the Project would not conflict with Policy LA/CO 3.2.



Relevant Goal or Policy	Relationship to Project
LA/CO 3.3 Prohibit exposed concrete drainage structures. Acceptable designs include combinations of earthen landscaped swales, rock rip-rap lined channels or rock-lined concrete channels. Property owners must provide for the maintenance of underground drainage structures.	The Project would develop the site with a network of drainage lines and water quality catch basins to accommodate storm water runoff flows. As depicted on Figure 2-7, <i>Proposed Site Plan</i> , a bioretention basin would be developed on the south-central portion of the Project site to capture storm water runoff from the northern and eastern portions of the Project site. The bioretention basin is designed to slow and treat on-site storm water runoff before it is discharged to the SBCFCD storm drain system. The bioretention basin would not consist of exposed concrete. Additionally, the proposed on-site landscaped areas and LID sports field proposed on the southwest portion of the Project site are designed to allow infiltrate storm water as a part of the Project's drainage plan. As shown on Figure 2-7, the Project provides for a 40-foot storm drain easement for the SBCFCD that would traverse the southwest portion of the Project site in a northeasterly to southwesterly orientation. The 40-foot SBCFCD easement would accommodate the on-site subsurface flood control improvements to be constructed by San Bernardino County as part of SBCFCD's Rimforest Storm Drain project, which would convey storm water flows from off-site areas north of the Project site through the Project site and ultimately connect to a future improved SBCFCD storm drain facility within SR-18. Because the proposed Project's drainage plan is dependent on connecting to facilities that will be installed as part of San Bernardino County's Rimforest Storm Drain Project, the proposed Church of the Woods Project is proposed to be constructed concurrent with or following installation of these regional drainage improvements. The COTW would maintain the on-site drainage features. Additionally, the Project would preserve approximately 50 % of the Project site as natural open space and would cluster development on the southern part of the Project site. Accordingly, the Project would not conflict with Policy LA/CO 3.3.
<u>Open Space</u>	



Relevant Goal or Policy	Relationship to Project
LA/OS 4: Improve and preserve open space corridors throughout the plan area.	The Project's potential to impact wildlife corridors is fully evaluated in DREIR Subsection 3.C and addressed in the Habitat Assessment included in Technical Appendix C. As indicated in this analysis, the proposed Project would result in less than significant impacts to wildlife corridors. Accordingly, the Project would be consistent with Policy LA/OS 4.
LA/OS 4.1: Where possible, require that open space areas set aside within individual developments be contiguous to natural areas adjacent to the site. Isolated open space areas within development shall be specifically discouraged, but may be accepted if no adjacent open space areas are available.	The Project would preserve approximately 50 % of the Project site as natural open space along the northern areas of the site that are contiguous to undeveloped U.S. Forest Service land to the north. Therefore, the Project would not conflict with this policy.
LA/OS 4.2: Use open space corridors to link natural areas.	The Project's potential to impact wildlife corridors is fully evaluated in DREIR Subsection 3.C and addressed in the Habitat Assessment included in Technical Appendix C. As indicated in this analysis, the proposed Project would result in less than significant impacts to wildlife corridors. Accordingly, the Project would be consistent with Policy LA/OS 4.2.



4. *San Bernardino National Forest Land Management Plan*

Although the proposed Project is not subject to the San Bernardino National Forest Land Management Plan and is designated as Non-Forest System Land, there is undeveloped SBNF land that abuts the northern areas of the site and across SR-18 to the south. The abutting SBNF lands are designated on the Land Use Zone Map as Developed Areas Interface (DAI), because they are adjacent to concentrated uses with high level of human activity (including the Project site). Therefore, development of the proposed Project would be consistent with non-forest system land uses anticipated in the Land Management Plan. The proposed Project would also be compatible with land uses allowed within the DAI, such as recreation residence tracts and lodges (USDA, 2005, Table 2.4.2). Furthermore, the Project proposes to preserve the natural open space areas on the northern portion of the site that abut the SBNF lands to the north, and does not propose any development adjacent to the SBNF lands located to the south across SR-18. The Open Space Overlay Map does not identify any public trails in the vicinity of the Project site; therefore, the Project has no potential to affect any known public trails. Additionally, as discussed in DREIR Subsection 3.A, *Aesthetics*, the Project would have less-than-significant impacts on scenic resources, scenic vistas, and scenic byways/highways. Based on the foregoing, the Project would not conflict with the San Bernardino National Forest Land Management Plan, and impacts would be less than significant.

5. *SCAG 2016-2040 RTP/SCS*

SCAG's 2008 RCP and 2016-2040 RTP/SCS are the applicable SCAG planning documents that apply to the proposed Project. The RCP identifies voluntary best practices to approach growth and infrastructure challenges in an integrated and comprehensive way. The SCS is an element of the RTP and was prepared pursuant to SB 375 (Public Resources Code § 21155.1 et seq.). SB 375 directs the California Air Resources Board (CARB) to set regional targets for greenhouse gas reductions from passenger vehicle use and tasks SCAG with developing a SCS that provides a plan for meeting the CARB regional target. On September 23, 2010, CARB issued a regional 8% per capita greenhouse gas reduction target for the planning year 2020, and a conditional target of 13% for 2035. In accordance with SB 375, the SCAG SCS, which is an element of the RTP, establishes a land use and transportation development strategy to accommodate regional population growth in a manner capable of achieving the CARB regional greenhouse gas targets. On June 28, 2016, CARB issued Executive Order G-16-066, whereby CARB formally accepted SCAG's determination that implementation of the 2016-2040 RTP/SCS would achieve the 2020 and 2035 greenhouse gas reduction targets for the SCAG region. The 2016-2040 RTP/SCS goals are meant to provide guidance for considering proposed projects for municipalities throughout the SCAG jurisdictional area within the context of regional goals and policies. As shown in Table 3.G-3, *Analysis of Consistency with SCAG 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy Goals*, implementation of the proposed Project would not result in an inconsistency with the adopted 2016-2040 RTP/SCS.



Table 3.G-3 Analysis of Consistency with SCAG 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy Goals

RTP/ SCS GOAL	GOAL STATEMENT	PROJECT CONSISTENCY DISCUSSION
G1	Align the plan investments and policies with improving regional economic development and competitiveness.	<u>No inconsistency identified.</u> This policy would be implemented by cities and the counties within the SCAG region as part of comprehensive local and regional planning efforts. The development of the proposed Church of the Woods Project would not impede economic development in the Project area or elsewhere in the County.
G2	Maximize mobility and accessibility for all people and goods in the region.	<u>No inconsistency identified.</u> DREIR Subsection 3.I, <i>Transportation and Circulation</i> , evaluates Project-related traffic impacts and specifies mitigation measures to reduce the potential for impacts to intersections within the County of San Bernardino to the extent feasible. Accordingly, the Project would not result in an inconsistency RTP/SCS Goal G2.
G3	Ensure travel safety and reliability for all people and goods in the region.	<u>No inconsistency identified.</u> As disclosed in DREIR Subsection 3.I, <i>Transportation and Circulation</i> , there is no component of the proposed Project that would result in a substantial safety hazard to motorists (refer to analysis under Threshold d of DREIR Subsection 3.I).
G4	Preserve and ensure a sustainable regional transportation system.	<u>No inconsistency identified.</u> This policy would be implemented by cities and the counties within the SCAG region as part of the overall planning and maintenance of the regional transportation system. The Project would not affect such planning or maintenance efforts within the County of San Bernardino. The Project would have no adverse effect on such planning or maintenance efforts.
G5	Maximize the productivity of our transportation system.	<u>No inconsistency identified.</u> This policy would be implemented by cities and the counties within the SCAG region as part of comprehensive transportation planning efforts. The Project would be consistent with the County of San Bernardino General Plan Circulation and Infrastructure Element, which meets this goal to maximize productivity.
G6	Protect the environment and health for our residents by improving air quality and encouraging active transportation (e.g., bicycling and walking).	<u>No inconsistency identified.</u> An analysis of the Project's environmental impacts is provided throughout this DREIR, and feasible mitigation measures are specified where warranted. Additionally, and as discussed in DREIR Subsection 3.I, <i>Transportation and Circulation</i> , the Project would have a less-than-significant impact regarding conflict with adopted policies or programs regarding public transit, bicycle, or pedestrian facilities. The Project would include internal sidewalks to reduce internal Project vehicle trips. The Project is located within the service areas of Mountain Area Regional Transit Authority, a public transit agency serving the Project vicinity within San Bernardino County. Mountain Area Regional Transit Authority operates the Rim Off the Mountain bus service route along SR-18 to the immediate south of the Project site. Based on the foregoing, the Project would not be inconsistent with RTP/SCS Goal G6.



Table 3.G-3 Analysis of Consistency with SCAG 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy Goals

RTP/ SCS GOAL	GOAL STATEMENT	PROJECT CONSISTENCY DISCUSSION
G7	Actively encourage and create incentives for energy efficiency, where possible.	<u>No inconsistency identified.</u> This policy provides guidance to establish local incentive programs to encourage and promote energy efficient development. The Project would be required to comply with the energy efficiency requirements of CALGreen, and includes design features related to building design, landscaping, and energy systems to promote the efficient use of energy.
G8	Encourage land use and growth patterns that facilitate transit and active transportation.	<u>No inconsistency identified.</u> This policy provides guidance to establish a local land use plan that facilitates the use of transit and active (non-motorized) forms of transportation. The Project proposes to develop the undeveloped property with church facilities that would include internal sidewalks. The proposed Project also does not impede access to public transit. As such, the Project is consistent with G8.
G9	Maximize the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies.	<u>No inconsistency identified.</u> This policy provides guidance to the County to monitor the transportation network and to coordinate with other agencies as appropriate. The proposed development of the Project site with the Church of the Woods Project would not affect the security of the regional transportation system.

Source: (SCAG, 2016a)

3.G.6 CUMULATIVE IMPACTS

The Project would result in cumulatively considerable impacts associated with Threshold b, as the proposed Project would conflict with General Plan Policy M/CI 1.1 and Lake Arrowhead Community Plan Policy LA/CI 1.1 related to levels of service on Project area roadways. The Project would not conflict with any policies related to the San Bernardino National Forest Land Management Plan, or the County of San Bernardino Development Code. Accordingly, the Project would contribute to a cumulatively significant impact due to a conflict the County General Plan and the Lake Arrowhead Community Plan.

3.G.7 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION

Threshold b): Significant and Unavoidable. The Proposed Project would result significant impacts associated with Threshold b), as the proposed Project would conflict with General Plan Policy M/CI 1.1 and Lake Arrowhead Community Plan Policy LA/CI 1.1 related to levels of service on Project area roadways. The Project would not conflict with any policies related to the San Bernardino National Forest Land Management Plan, or the County of San Bernardino Development Code. Accordingly, the Project would result in a significant, cumulatively considerable impact due to a conflict the County General Plan and the Lake Arrowhead Community Plan.



3.G.8 MITIGATION MEASURES

3.G.8.1 APPLICABLE COUNTY REGULATIONS AND DESIGN REQUIREMENTS

The following are applicable regulations and design requirement will be imposed on the Project by San Bernardino County pursuant to the County's Development Code. Although these requirements technically do not meet CEQA's definition for mitigation because they are regulatory requirements, they are specified herein to document required Project compliance with applicable County regulations.

- The Project will comply with the provisions specified for sites located within the IC District as specified in County Development Code Chapter 85.06.
- The Project will comply with the San Bernardino County Fire Safety Overlay Fire Safety Area 1 requirements specified in County Development Code Chapter 82.13.
- The Project will comply with the Plant Protection and Management Ordinance requirements specified in County Development Code, Chapter 88.01.
- The Project will comply with the provisions specified for properties located within the Biotic Resources Overlay Map as identified in County Development Code Chapter 82.11.

3.G.8.2 MITIGATION MEASURES

No mitigation measures are required beyond those identified throughout this DREIR.



3.H NOISE

This section is based in part on information provided in a Noise and Vibration Impact Assessment prepared by HDR, July 2018. This document is provided as *Technical Appendix G* to this Draft Revised EIR (DREIR). The following analysis defines the existing noise environment within the Project area and estimates future noise levels at surrounding land uses resulting from Project construction and operation. Potential short-term and long-term noise levels associated with the proposed Project are assessed with respect to the County of San Bernardino's Noise Element and County Development Code—Chapter 83.01 “General Performance Standards,” Sections 83.01.080 “Noise” and 83.01.090 “Vibration” — as well as other industry recognized noise criteria.

3.H.1 ENVIRONMENTAL SETTING

3.H.1.1 NOISE CHARACTERISTICS AND SOUND MEASUREMENT

Sound is mechanical energy transmitted by pressure waves in a compressible medium such as air. Noise is generally defined as unwanted sound, and can have adverse effects on people, ranging from annoyance, speech and sleep interference, and physiological responses, to hearing loss. Although sound can be easily measured, the perceptibility of sound is subjective and the physical response to sound complicates the analysis of its impact on people. People judge the relative magnitude of sound sensation in subjective terms such as “noisiness” or “loudness.” Sound pressure magnitude is measured and quantified using a logarithmic ratio of pressures, the scale of which gives the level of sound in decibels (dB). A decibel is defined as the ratio between a measured value and a reference value that corresponds to the lower threshold of human hearing, which is defined as 20 micropascals (μPa) (HDR, 2018, p. 7).

The human auditory system is not equally sensitive to sound at all frequencies and sounds are adjusted with a weighting filter. The A-weighted filter system is applied to compensate for the human auditory system frequency response, known as dBA (HDR, 2018, p. 9). A more detailed discussion of the characteristics of sound is provided in the Noise and Vibration Impact Assessment, included as *Technical Appendix G* to this DREIR.

Time variation in noise exposure is typically expressed in terms of the average energy over time (L_{eq}), or alternatively, as a statistical description of the sound level that is exceeded over some fraction of a given observation period. For example, the L_{50} noise level represents the noise level that is exceeded 50% of the time. Half the time the noise level exceeds this level and half the time the noise level is less than this level. This level is also representative of the level that is exceeded 30 minutes in an hour. Similarly, the L_{02} , L_{08} , and L_{25} represent the noise levels that are exceeded 2, 8 and 25% of the time, respectively, or one (1), five (5), and fifteen (15) minutes per one-hour period, respectively. In addition, L_{max} represents the maximum A-weighted sound level as determined during a specified measurement period, which is typically obtained over a 1 second period. These “L” values are used to evaluate the compliance of stationary noise sources with County of San Bernardino Performance Standards, as discussed below.

Although the A-weighted scale accounts for the range of people's response, and therefore, is commonly used to quantify individual event or general community sound levels, the degree of annoyance or other response



effects also depend on several other perceptibility factors. These factors include:

- Ambient (background) sound level;
- Magnitude of sound event with respect to the background noise level;
- Duration of the sound event; and
- Time of day that the event occurs.

Several methods have been devised to relate noise exposure over time to community response. A commonly used noise metric for this type of study is the Community Noise Equivalent Level (CNEL). The CNEL, originally developed for use with California Airport Noise Regulation, adds a 5-dBA penalty to noise occurring during evening hours from 7:00 P.M. to 10:00 P.M., and a 10-dBA penalty to sounds occurring between the hours of 10:00 P.M. to 7:00 A.M. to account for the increased sensitivity to noise events that occur during the quiet late evening and nighttime periods. Thus, the CNEL noise metric provides a 24-hour average of A-weighted noise levels at a particular location, with an evening and a nighttime adjustment, which reflects increased sensitivity to noise during these times of the day (HDR, 2018, p. 9).

3.H.1.2 GROUNDBORNE VIBRATION

Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. Two descriptors are often used to discuss the quantification of vibration: peak particle velocity (PPV) and root mean square (rms). PPV is used to evaluate potential damage to building due to construction-related vibration and rms is used to evaluate the potential annoyance to humans due to construction-related vibration (HDR, 2018, p. 9). Typically, groundborne vibrations generated by man-made activities attenuate rapidly with distance from the source of the vibration. Man-made vibration issues are therefore usually confined to short distances (i.e., 500 feet or less) from the source.

Both construction and operation of development Projects can generate ground-borne vibration. In general, demolition of structures during construction generates the highest vibrations. Construction equipment such as vibratory compactors, heavy trucks, and pavement breakers can generate perceptible vibration during construction activities at distances of 10 to 25 feet. Pile drivers can generate perceptible vibration at up to 100 feet. (HDR, 2018, p. 21)

3.H.2 REGULATORY FRAMEWORK

Many government agencies have established noise standards and guidelines to protect citizens from potential hearing damage and various other adverse physiological and social effects associated with noise and vibration. Local regulation of noise ordinarily involves implementation of general plan policies and noise ordinance standards. Local general plans identify general principles intended to guide and influence development plans, and noise ordinances set forth specific standards and procedures for addressing particular noise and vibration sources and activities. The County of San Bernardino has adopted a number of policies, which are, in part, based on federal and State regulations that are directed at controlling or mitigating environmental noise effects. County policies and standards that are relevant for Project development and operation are discussed below in Subsection 3.H.2.2.



3.H.2.1 FEDERAL

A. Federal Transit Administration

The Federal Transit Administration (FTA) published a Noise and Vibration Impact Assessment (NVIA) which provides guidance for preparing and reviewing the noise and vibration sections of environmental documents. In the interest of promoting quality and uniformity in assessments, the manual is used by Project sponsors and consultants in performing noise and vibration analyses for inclusion in environmental documents. The manual sets forth the methods and procedures for determining the level of noise and vibration impacts from most federally-funded transit Projects and for determining what can be done to mitigate much impacts (FTA, 2018, p. 1-1)

The NVIA also establishes criteria for acceptable ground-borne vibration, which are expressed in terms of root mean square (rms) velocity levels in decibels (VdB) and the criteria for acceptable groundborne noise levels are expressed in terms of A-weighted (dBA) sound levels. The FTA identifies three categories of land uses and provides groundborne vibration and noise impact criteria for each category of land use. The groundborne vibration and noise criteria for each land use category are summarized in Table 3.H-1, *Groundborne Vibration and Noise Impact Criteria*.

Table 3.H-1 Groundborne Vibration and Noise Impact Criteria

Land Use Category	Max Lv (VdB) ¹
Workshop	90
Office	84
Residential – Daytime	78
Residential – Nighttime	72

Lv= Vibration level

1. As measured in 1/3-octave bands of frequency over the frequency ranges of 8 to 80 Hertz (HZ)

Source: (HDR, 2018, Table 4-4)

3.H.2.2 REGIONAL

A. San Bernardino County General Plan

The County of San Bernardino General Plan, which was adopted in 2007, includes applicable goals and policies within the Noise Element that address impacts related to noise are discussed below.

1. Noise Element

The overall purpose of the Noise Element is to limit the exposure of the community to excessive noise levels. The following are applicable Countywide and Mountain Region goals of the San Bernardino County Noise Element:

- N 1** The County will abate and avoid excessive noise exposures through noise mitigation measures incorporated into the design of new noise-generating and new noise-sensitive land uses, while protecting areas within the County where the present noise environment is within acceptable limits.



N 2 The County will strive to preserve and maintain the quiet environment of mountain, desert, and other rural areas.

Policies from the Noise Element pertaining to the Mountain Region that are applicable to the Project include the following:

M/N1 The County will strive to preserve and maintain the quiet environment of the Mountain Region.

B. San Bernardino County Development Code

Section 83.01.080 of the San Bernardino Development Code provides performance standards for acceptable noise levels for various types of land uses. Interior and exterior standards for noise generated by mobile (or transportation-related) sources are presented in Table 3.H-2, *San Bernardino County Noise Standards*. Noise standards to control noise levels from stationary noise sources are summarized in Table 3.H-3, *San Bernardino County Stationary Noise Standards*.

Areas within San Bernardino County are designated as “noise-impacted” if exposed to existing or Projected future noise levels from mobile or stationary sources exceeding the standards presented in Table 3.H-2 and Table 3.H-3 (County of San Bernardino, 2018). New development of residential or other noise-sensitive land uses is not permitted in noise-impacted areas unless affective mitigation measures are incorporated into the Project design to reduce noise to levels at or below these standards.

The County recognizes that some forms of noise are required for urban development and maintenance and are difficult to control. Section 83.01.080(g), “Exempt Noise” of the Performance Standards provides for these exemptions. Those applicable to the Project include:

- Motor vehicles not under the control of the commercial or industrial use;
- Emergency equipment, vehicles, and devices; and
- Temporary construction, maintenance, repair, or demolition activities between 7:00 A.M. and 7:00 P.M., except Sundays and federal holidays.

Additionally, Section 83.01.090 of the San Bernardino Development Code provides a performance standard for acceptable vibration levels. According to the Development Code:

“No ground vibration shall be allowed that can be felt without the aid of instruments at or beyond the lot line, nor shall any vibration be allowed which produces a particle velocity (PPV) greater than or equal to two-tenths (0.2) inches per second (in/sec) measured at or beyond the lot line.”

The County recognizes that some forms of vibration are required for urban development and maintenance and are difficult to control. Section 83.01.090(c) “Exempt Vibrations” provides for these exemptions. Those applicable to the Project include:

- Motor vehicles not under the control of the subject use.
- Temporary construction, maintenance, repair, or demolition activities between 7:00 a.m. and 7:00 p.m., except Sundays and Federal holidays.



Table 3.H-2 San Bernardino County Noise Standards

Land Use		L _{dn} (or CNEL), dBA	
Categories	Uses	Interior	Exterior
Residential	Single and multi-family, duplex, mobile homes	45	60
	Hotel, motel, transient housing	45	60
Commercial	Commercial retail, bank, restaurant	50	NA
	Office building, research and development, professional offices	45	65
	Amphitheater, concert hall, auditorium, movie theater	45	NA
Institutional/Public	Hospital, nursing home, school classroom, religious institution, library	45	65
Open Space	Park	NA	65

1. The indoor environment shall exclude bathrooms, kitchens, toilets, closets, and corridors.

2. The outdoor environment shall be limited to:

- Hospital/office building patios
- Hotel and motel recreation areas
- Mobile home parks
- Multi-family private patios or balconies
- Park picnic areas
- Private yard of single-family dwellings
- School playgrounds

3. An exterior noise level up to 65 dB(A) (or CNEL) shall be allowed provided exterior noise levels have been substantially mitigated through a reasonable application of the best available noise reduction technology, and interior noise exposure does not exceed 45 dB(A) (or CNEL) with windows and door closed. Requiring that windows and doors remain closed to achieve an acceptable interior noise level shall necessitate the use of air conditioning or mechanical ventilation.

CNEL= (Community Noise Equivalent Level). The average equivalent A-weighted sound level during a 24-hour day, obtained after addition of approximately five decibels to sound levels in the evening from 7 p.m. to 10 p.m. and 10 decibels to sound levels in the night from 10 p.m. to 7 a.m.

Source: (County of San Bernardino, 2018, Section 83.01.080, Table 83-3)



Table 3.H-3 San Bernardino County Stationary Noise Standards

Affected Land Use (Receiving Noise)	7:00 a.m. – 10:00 p.m.	10:00 p.m. – 7:00 a.m.
	Leq (dBA)	Leq (dBA)
Residential	55	45
Professional Services	55	55
Other Commercial	60	60
Industrial	70	70

Leq= (Equivalent Energy Level). The sound level corresponding to a steady-state sound level containing the same total energy as a time-varying signal over a given sample period, typically 1, 8 or 24 hours.

dB(A) = (A-weighted Sound Pressure Level). The sound pressure level, in decibels, as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound, placing greater emphasis on those frequencies within the sensitivity range of the human ear

Ldn = (Day-Night Noise Level). The average equivalent A-weighted sound level during a 24-hour day obtained by adding 10 decibels to the hourly noise levels measured during the night (from 10 pm to 7 am). In this way Ldn takes into account the lower tolerance of people for noise during nighttime periods.

Source: (County of San Bernardino, 2018, Section 83.01.080, Table 83-2)

3.H.3 EXISTING NOISE CONDITIONS

3.H.3.1 NOISE-SENSITIVE RECEPTORS

Some land uses are more sensitive to intrusive noise than others due to the amount of noise exposure and the types of activities involved at the receptor location. Residences, schools, motels and hotels, libraries, religious institutions, hospitals, nursing homes, and parks are generally more sensitive to noise than commercial and industrial land uses. The proposed Project site is located in a rural, wooded area. The closest off-site noise sensitive land uses to the Project site are the residences located at a distance of approximately 90 feet west of the proposed soccer field. The locations of noise sensitive receptors in relation to the Project site are identified in Figure 3.H-1, *Sensitive Receptors and Noise Monitoring Locations*.

3.H.3.2 AMBIENT NOISE LEVELS

The primary existing noise sources within the Project area are transportation facilities. The heaviest traveled roadway in the Project area is Highway 18 (Rim of the World Highway) located immediately south of the Project site. In addition, traffic on Bear Springs Road and Daley Canyon Road, (located west and east of the Project site, respectively) also contribute to the existing ambient noise in the Project area, although to a lesser extent, due to distance, intervening forest-land, and lighter traffic. On-site ambient noise levels were measured by LSA Associates, Inc. (LSA) in September of 2005 for a noise impact analysis previously prepared for a prior version of the proposed Project. Although the noise levels were measured in 2005, the Project site, surrounding area, and existing traffic volumes have not substantially changed; therefore, the ambient noise levels are still applicable in the Project vicinity and are typical of noise levels experienced within rural areas throughout the County of San Bernardino (HDR, 2018, p. 11).

To ascertain existing noise levels, an ambient noise survey was conducted on site by LSA Associates on September 15 and 16, 2005. Two short-term measurements were conducted on September 15, 2005. Although the noise level measurements were taken in 2005, the Project site, surrounding area, and existing traffic



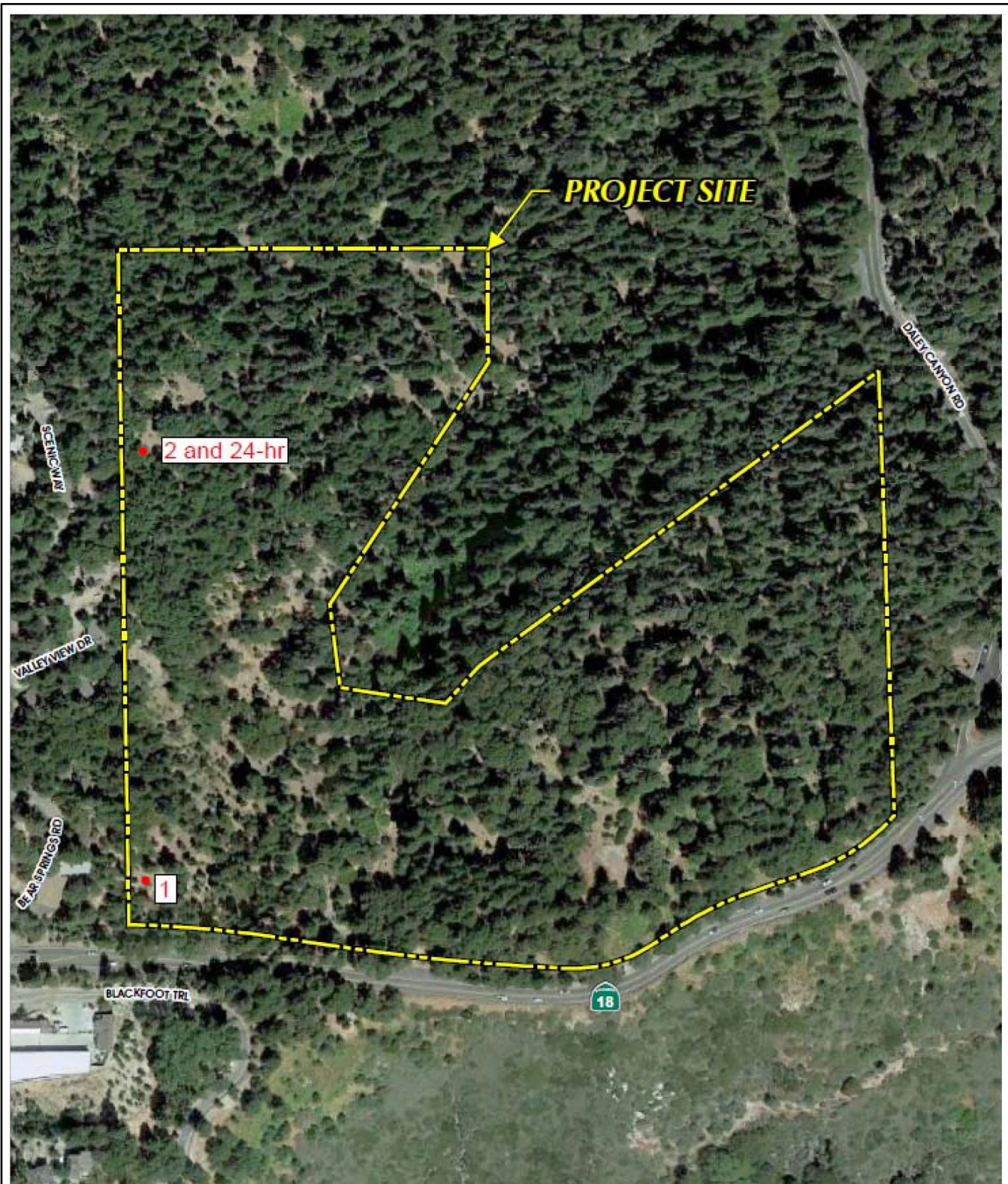
volumes have not substantially changed since then. Therefore, the noise level measurements are still applicable.

Measurement Location 1 was near the proposed sports field, approximately 100 feet north of Highway 18 to record the existing traffic related noise levels along Highway 18. Measurement Location 2 was conducted adjacent to the nearby residences on the west of the Project site, approximately 750 feet north of Highway 18. Figure 3.H-1 and Table 3.H-4, *Ambient Noise Monitoring Results*, provide the locations and noise sources observed during noise monitoring, as well as noise levels recorded at these locations. As shown in Table 3.H-4, Location 1 registered a higher ambient noise level (57.4 dBA L_{eq}) than Location 2 (40.1 dBA L_{eq}) which was adjacent to the existing residences on the west of the Project site and further away from Highway 18 traffic. Therefore, the existing ambient noise level at Location 2 is well below the County's daytime exterior noise standard of 55 dBA, L_{eq} for residential uses. The existing ambient noise levels at Location 1 slightly exceed the County's daytime exterior noise standard of 55 dBA, L_{eq} for residential uses. However, the predominant noise source surrounding Location 1 is roadway noise from Highway 18 which is not considered a stationary noise source and is not regulated under Section 83.01.080 (c)(2) of the County's Development Code.

Table 3.H-4 Ambient Noise Monitoring Results

Site	Location	Date	Start Time	Duration (min)	L_{eq} (dBA)	L_{max} (dBA)
1	Near the proposed southern playfield, 100 feet north of SR-18	9/15/05	9:53 A.M.	20	57.4	66.8
2	Adjacent to the residences on the west, approximately 750 feet north of SR-18	9/15/05	9:30 A.M.	20	40.1	63.6

Source: (HDR, 2018, Table 3-1)



Source(s): HDR (July 2018)

Figure 3.H-1



NOT TO SCALE



SENSITIVE RECEPTORS AND NOISE MONITORING LOCATIONS



Table 3.H-5 24-Hour Ambient Noise Measurement Data

Date	Time	<u>Measured Noise Level (dBA)¹</u>		
		<u>L_{eq}</u>	<u>L_{max}</u>	<u>L_{min}</u>
9/15/05	10:00 A.M.	41.1	55.6	33.9
	11:00 A.M.	47.5	68.8	35.4
	12:00 P.M.	41.7	54.6	35.9
	1:00 P.M.	42.0	54.0	33.9
	2:00 P.M.	42.5	54.7	37.6
	3:00 P.M.	46.8	67.4	38.6
	4:00 P.M.	44.9	61.6	39.3
	5:00 P.M.	43.4	60.6	35.3
	6:00 P.M.	41.9	57.7	35.1
	7:00 P.M.	40.4	61.4	34.0
	8:00 P.M.	41.3	54.2	35.6
	9:00 P.M.	41.9	53.9	36.3
	10:00 P.M.	38.1	49.9	32.7
	11:00 P.M.	37.8	48.7	33.4
9/16/05	12:00 A.M.	36.4	43.8	32.3
	1:00 A.M.	35.0	44.9	32.0
	2:00 A.M.	35.2	43.8	32.0
	3:00 A.M.	35.3	46.9	29.8
	4:00 A.M.	35.5	48.2	29.7
	5:00 A.M.	38.8	52.5	30.9
	6:00 A.M.	43.7	54.7	34.7
	7:00 A.M.	50.2	74.5	34.8
	8:00 A.M.	45.5	65.3	34.3
	9:00 A.M.	39.7	50.0	34.3
	10:00 A.M.	41.6	52.4	37.3
24-Hour Measurement Results		CNEL: 46.7 dBA		

1. Based on continuous sound measurements conducted September 15–16, 2005.

Source: (HDR, 2018, Table 3-2).

In addition to the short-term noise measurements as shown on Table 3.H-4, a 24-hour continuous noise measurement was conducted on September 15th through 16th, 2005 at the rear of the Project site, adjacent to the existing nearby residences that are located west of the Project site (Location 2). This location was selected to account for noise sensitive receptors in the vicinity of the Project site. The result of the reading is included in Table 3.H-5, *24-Hour Ambient Noise Measurement Data*. The measured CNEL noise level at this location is 46.7 dBA. Based on the exterior standards for noise generated by mobile (or transportation-related) sources indicated in Table 3.H-2, this noise environment is acceptable for a religious institution, such as the proposed Project.



3.H.3.3 TRAFFIC NOISE

The existing traffic noise level in the Project area was evaluated using the Federal Highway Administration (FHWA) traffic noise prediction model. The model requires several parameters, including traffic volumes, vehicle mix, vehicle speed, and roadway geometry to compute L_{eq} values during daytime, evening, and nighttime hours. The existing average daily traffic (ADT) volumes are included in the Project traffic study (*Technical Appendix H*) provided by Translutions, Inc., September 2018.

Modeling was performed for the major roadway segments in the Project area that would receive Project-generated traffic. Table 3.H-6, *Existing Vehicular Noise Contours*, presents the Projected existing CNEL values along the studied roadways in the Project area as well as the distances to the 70, 65, and 60 dBA CNEL noise contours. These contours were developed based on soft site modeling and simple, flat terrain with a clear line-of-sight between receptors and vehicles. The noise levels presented on Table 3.H-6 represent the worst-case scenario, which assumes that no shielding is provided between the traffic and the location where the noise contours are drawn.

As shown in Table 3.H-6, traffic noise along these roadway segments is generally low to moderate.

3.H.3.4 TOPOGRAPHIC EFFECTS (CANYON EFFECTS)

The Project site is located in a mountainous area where sounds travel irregularly. As a result, there is a potential for noise levels originating from the Project site to be amplified by canyon effects. Canyon effects occur when the surrounding topography creates a channel that can reflect noise and carry it over great distances (HDR, 2018, p. 19). The same generated noise might be audible over a great distance or it might be almost inaudible, depending on location. Generally, where the viewer's line-of-sight is obscured by hills or dense forest, sound transmission is blocked in a similar manner as a building placed between a noise source and the receiver. Studies of highway noise through canyons have shown that canyon effects can result in noise increases of up to 3 dBA. The canyon walls, to some extent, act as parallel sound walls with respect to multiple reflections. However, unless the slopes adjacent to the noise source are vertical, the build-up of reflections will be limited due to slope angles. The slopes within the vicinity of the Project site are covered with soft, noise-absorbing vegetation and are not vertical. Therefore, the potential canyon effects are anticipated to be negligible. (HDR, 2018, p. 16)



Table 3.H-6 Existing Vehicular Noise Contours

Roadway Segment	ADT	CNEL at 50 Feet from Outermost Lane, (dBA)	Distance to Noise Contours (feet):		
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
Bear Springs Rd. north of SR-18	600	52.1	<50	<50	<50
Daley Canyon Rd.					
Between SR-189 and Daley Canyon Access	6,360	62.4	<50	<50	80.7
Between Daley Canyon Access and SR-18	4,150	60.5	<50	<50	60.7
SR-173 north of SR-18	4,200	60.6	<50	<50	61.2
SR-18					
West of Lake Gregory Dr.	8,360	66.2	<50	67.9	146.3
Between Lake Gregory Dr. and Bear Springs Rd.	9,800	66.9	<50	75.5	162.7
Between Bear Springs Rd. and Project Access	9,760	66.9	<50	75.3	162.2
Between Project Access and Daley Canyon Rd.	9,750	66.9	<50	75.2	162.1
Between Daley Canyon Rd. and Daley Canyon Access	5,800	64.7	<50	53.2	114.7
Between Daley Canyon Access and SR-173	5,920	64.7	<50	54.0	116.2
East of SR-173	3,940	63.0	<50	<50	88.6
SR-189					
Between Grass Valley Rd. and Daley Canyon Rd.	4,850	57.7	<50	<50	<50
Between Daley Canyon Rd. and North Bay Rd.	5,370	58.2	<50	<50	<50
East of North Bay Rd.	4,050	56.9	<50	<50	<50

Source: (HDR, 2018, Table 3-3)



3.H.4 THRESHOLDS OF SIGNIFICANCE

A Project is considered to have a significant noise impact when it causes an adopted noise standard to be exceeded at the Project site or for nearby sensitive receptors. The San Bernardino County noise standards are presented above in Table 3.H-2 and Table 3.H-3. Table 3.H-2 provides the interior/exterior mobile noise standards, and Table 3.H-3 includes the exterior noise standards for stationary sources. A change of 5 dBA is readily discernable to most people in an exterior environment and is considered significant. Furthermore, most people can detect changes in sound levels of approximately 3 dBA under normal, quiet conditions, while a 1 to 3 dBA change in noise level is only detectable under quiet, controlled conditions and changes of less than 1 dBA are usually indiscernible.

Based on these factors and the County of San Bernardino policies and standards that are relevant to the proposed Project, noise impacts are considered significant if any of the following conditions occur:

- a. Exposure of persons to or generation of noise level in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies*
- b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels*
- c. Cause a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project*
- d. Cause a substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project*
- e. For a Project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels*
- f. For a Project within the vicinity of a private air strip, would the Project expose people residing or working in the Project area to excessive noise levels*

3.H.5 SIGNIFICANT IMPACT CRITERIA

The ambient noise levels measured within the Project area are similar to or lower than the County's stationary noise source thresholds. As on-site events would not occur during nighttime hours (10:00 P.M. to 7:00 A.M.), no nighttime noise thresholds were established. According to the County General Plan, areas that are exposed to existing or projected future exterior noise levels from mobile or stationary sources that exceed the County's noise standards are designated as "noise impacted." (County of San Bernardino, 2014) Under existing conditions, areas within the vicinity of Highway 18 experience exterior noise levels that exceed the County's noise standards; therefore, these areas are considered noise impacted. For areas that are "noise impacted", such as the area within the vicinity of Highway 18, a significant noise impact would occur if the Project increases the ambient noise level by 3 dBA or more. For locations where the existing ambient noise level is less than the County's hourly performance standards, a significant noise impact would occur if the Project increases the ambient noise level by 5 dBA or more. Therefore, the thresholds listed in Table 3.H-7, *Existing*



Stationary Noise Source Thresholds (dBA), based on the existing ambient noise levels, were used for determining significance.

Table 3.H-7 Existing Stationary Noise Source Thresholds (dBA)

Land Use Category	Ambient Noise Level		Impact Level	
	L _{eq}	L _{max}	L _{eq}	L _{max}
Residences located within 200 feet of SR-18	57 ¹	66	60	71
Residences between 200ft and 500 feet of SR-18	50	64	55	69
Residences located greater than 500 feet from SR-18	43	62	48	67

1. Ambient noise level exceeded the County's noise threshold (55 dBA L_{eq}). Therefore, exceeding the ambient noise level by 3 dBA would result in a significant noise impact.

Source: (HDR, 2018, Table 4-6)

3.H.6 ENVIRONMENTAL IMPACTS

3.H.6.1 METHODOLOGY

Sound levels decrease (attenuate) exponentially as the distance from the noise source increases. For a “point” source, such as a piece of mechanical equipment, the sound level normally attenuates by about 6 dBA for each doubling of distance. In comparison, sound generated by a “line” source - such as stream of vehicles traveling along a busy street - attenuates by about 3 dBA for each doubling of distance. These attenuation rates are based upon “hard” reflective surfaces (e.g., pavement and concrete) between noise source and receiver. For “soft” surfaces (e.g., soft dirt or area covered with vegetation), the intervening ground absorbs some of the sound energy that would otherwise be reflected off the ground. Thus, the attenuation rate of point source and line source would be 7.5 dBA and 4.5 dBA, respectively.

The analysis assumed soft surfaces between noise sources and receivers and does not include additional attenuation due to intervening topographic features, such as natural terrain, vegetation, rocks, and ridgelines. The Projected noise levels also do not include “atmospheric attenuation” (i.e., the loss of sound energy due to the warming of the air). Sound attenuation effects provided by these features are not considered in this assessment and could somewhat reduce predicted noise levels.¹ The stationary source noise impact calculations are included in *Technical Appendix G* of this DREIR.

3.H.6.2 CONSTRUCTION NOISE AND VIBRATION

During the Project construction, temporary noise and vibrations would be generated, principally from two sources: (a) noise and vibrations from the transport of workers and equipment to and from the construction site and (b) the noise and vibrations from construction activities. Construction activities are performed in discrete steps (site preparation, grading, and construction), each of which has its own mix of equipment, and, consequently, its own noise characteristics. However, despite the variety in the type and size of construction

¹ As an example, Caltrans recommends the following noise reduction for line noise sources where trees and vegetation are dense and thick: “For a vegetative strip to have a noticeable effect on noise levels it must be dense and wide. A strand of trees with a height that extends at least 16 feet above the line of sight between the source and receiver must be at least 100 feet wide and dense enough to completely obstruct a visual path to the source to attenuate traffic noise by 5 dBA. The effects appear to be cumulative, i.e., 200 feet wide strand of trees would reduce noise by an additional 5 dBA.”



equipment, similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phase. Table 3.H-8, *Project Construction Noise Levels by Phase*, lists the anticipated equipment types for each phase of Project construction and their potential construction noise impacts.

The methodology for analyzing construction noise associated with the proposed Project used a mix of typical construction equipment, estimated durations, and construction phasing. The mass grading and fine grading phase, which includes excavation and grading of the site, tends to generate the highest noise levels, because the noisiest construction equipment is earthmoving equipment. Earthmoving equipment includes excavating machinery such as bulldozers, front-end loaders, and graders. Typical operating cycles for these types of construction equipment may involve one or two minutes of full power operation followed by three or four minutes at lower power settings.

The mass grading and fine grading phases are expected to require the use of tractors, excavators, and dozers. The combined noise level for these activities is calculated based on noise levels provided in Table 3.H-8 and accounting for both the number of pieces and spacing of the heavy equipment used in the construction effort. The combined noise level during this phase of construction would be 85.0 dBA L_{max} at a distance of 50 feet from the construction area. In later phases during building construction, noise levels are typically reduced from this value as physical structures further break up line-of-sight noise transmission.

Construction vibration levels associated with the proposed Project were analyzed using a mix of typical construction equipment and estimated durations. Table 3.H-9, *Vibration Source Amplitudes for Construction Equipment*, lists the vibration source amplitudes for commonly used construction equipment. As pile driving is not required and no substantial operational vibration sources are proposed as part of the Project operation, the highest PPV for the proposed Project would be 0.210 in/sec associated with on-site vibration rollers (HDR, 2018, p. 28).



Table 3.H-8 Project Construction Noise Levels by Phase

Phase	Equipment ¹			Composite Sound Level ³	
	Type	Quantity	L _{max} at 50 feet	L _{max} at 50 feet	L _{eq} at 300 feet
Site Preparation	Tractor	1	84.0	84.0	71.3
	Excavator	1	80.7		
	Dozer	2	81.7		
Curb Grading	Scraper	1	83.6	85.0	69.8
	Loader	2	79.1		
	Excavator	3	80.7		
	Grader	1	85.0		
	Tractor	1	84.0		
Fine Grading	Grader	1	85.0	85.0	69.4
	Roller	1	84.0		
Building Construction	Skid Steer	1	77.6	80.6	69.7
	Tractor	1	84.0		
	Crane	1	80.6		
	Forklift	3	74.7		
	Generator	1	80.6		
	Loader	3	79.1		
	Welder	1	74.0		
Paving	Paver	2	77.2	80.0	66.1
	Paving Equipment	2	77.2		
	Roller	2	80.8		
Architectural Coating	Compressor	1	77.7	77.7	58.1

1. Equipment mix obtained from the CalEEMod emissions calculations prepared for the Air Quality Assessment, April 2018.

2. Measured L_{max} at given reference distance obtained from the FHWA Roadway Construction Noise Model, FHWA 2006.

3. Distance factor determined by the inverse square law defined as 6 dBA per doubling of distance as sound travels away from an idealized point.

Source: (HDR, 2018, Table 5-1)



Table 3.H-9 Vibration Source Amplitudes for Construction Equipment

Equipment	PPV at 25 Feet (in/sec)	Approximate Lv ¹ at 25 Feet (VdB)
Pile Driver (impact) – upper range	1.515	112
Pile Driver (impact) – typical	0.644	104
Pile Driver (sonic) – upper range	0.734	105
Pile Driver (sonic) – typical	0.170	93
Clam shovel drop (slurry wall)	0.202	94
Hydromill (slurry wall) – in soil	0.008	66
Hydromill (slurry wall) – in rock	0.017	75
Vibration Roller	0.210	94
Hoe Ram	0.089	87
Large bulldozer	0.089	87
Caisson drilling	0.089	87
Loaded trucks	0.076	86
Jackhammer	0.035	79
Small bulldozer	0.003	58

1. RMS velocity in decibels (VdB) re 1 micro-inch/sec

Source: (HDR, 2018, Table 5-2)

3.H.6.3 OPERATIONAL NOISE

Noise impacts from traffic associated with the proposed Project were evaluated using the average daily traffic (ADT) volumes of the future year 2040, with and without the proposed Project. Weighting the modeled L_{eq} noise levels and logarithmically summing them up, results in 24-hour combined CNEL.

The traffic volumes were obtained from the Project Traffic Impact Analysis, prepared by Translutions and summarized in Section 3.I, Transportation and Circulation. (The complete Traffic Impact Analysis, prepared for the Project, is provided in *Technical Appendix H* to this DREIR). As most of the area has no posted speed limit, for modeling purpose, it was assumed that vehicles travel at an average 45 miles per hour.

For the outdoor sports field uses, representative noise levels for sports activities were established by Translutions, based on the data reported on average A-weighted sound level of speech for different vocal modes (e.g., male shouting, female shouting, loud and raised voices for women and men), measured at a distance of one meter (three feet) in a free field.² Projection of noise levels from an athletic event was performed based on assumptions on the number of people present at the event (including members of two teams, coaches, and spectators), mix of men and women, and combination of different vocal modes during the event. The complete detailed assumptions and results are presented in the Noise Impact Analysis included as *Technical Appendix G* of this DREIR.

² *Handbook of Acoustical Measurements and Noise Control, Third Edition, edited by Cyril M Harris, 1991.*



3.H.7 IMPACT ANALYSIS

- Threshold a)** *Exposure of persons to or generation of noise level in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*
- Threshold c)** *Cause a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project?*
- Threshold d)** *Cause a substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project*

1. Construction

Construction of the proposed Project would be required to occur within the time restrictions identified in the County Development Code. In accordance with Section 83.01.080(g)(3), construction would be required to take place only between the hours of 7:00 A.M. and 7:00 P.M., except Sundays and Federal Holidays (County of San Bernardino, 2018). The Project does not include any components that would require construction activities outside of the hours specified in the County's Development Code.

Temporary construction noise has the potential to generate excessive noise levels that have the potential to affect nearby sensitive receptors, such as residences. Construction of the proposed Project would require the use of heavy equipment that may be audible at off-site locations. Additionally, noise from construction equipment may vary depending on construction phase and equipment type and quantity at a given location. The nearest sensitive receptors to the Project site are the existing residences located west along Bear Spring Road. At its closest point, construction activities would take place within 50 feet of these land uses. Construction noise levels would reach a maximum level of 85.0 dBA L_{max} at the sensitive receptors and the average level is calculated to be 71.0 dBA L_{eq} . (HDR, 2018, p. 26) which would exceed the 71 dBA L_{max} 60 dBA L_{eq} exterior noise significance thresholds for sensitive receptors listed in Table 3.H-7 by more than 5 dBA at the nearest residences across Bear Springs Road, west of the Project site and at the nearest homes located northwest of the Project site (HDR, 2018, p. 26). Although Project construction activities would be in accordance with the County's Development Code, the Project would still expose sensitive noise receptors to excessive noise levels; as such, a significant short-term impact would occur during construction.

2. Operational Conditions

The proposed Project would result in the operation of a church facility that includes an outdoor sports field. The closest residences to the proposed sports field would be located approximately 240 feet from the center of the activity area. As described in the Noise Impact Assessment (*Technical Appendix G* of this DREIR), the noise levels generated from the outdoor activities would be approximately 50 dBA L_{eq} (one hour) at 240 feet; therefore, long-term stationary noise from the sports field would not exceed the significance threshold of 60 dBA L_{eq} (one hour) listed in Table 3.H-7 (HDR, 2018, p. 30). Accordingly, the outdoor activities at the Project would not generate noise levels in excess of the County's Development Code and impacts would be less-than-significant.

The on-site caretaker's residence would be located approximately 420 feet from SR-18's roadway centerline. Distance attenuation would reduce the traffic noise at this location to 56 dBA. (HDR, 2018, p. 31) This exterior



noise level would be below the County's 65 dBA CNEL exterior noise standard; therefore, long-term Project operation would not expose the onsite caretaker residence to excessive noise levels.

Table 3.H-10, *Estimated Noise Level Changes on Local Roadways Due to Project – Existing Year*, presents the existing year daily Projected traffic noise without the proposed Project and compares these levels to the existing year traffic-generated noise levels with the proposed Project. As Table 3.H-10 shows, the Project-related traffic noise level increase would be 2.2 dBA CNEL or less for all study area roadway segments. This increase is less than audible and well under the 5-dBA threshold of significance for areas that are not “noise impacted.” Therefore, noise from Project-generated traffic would be less than significant and would not expose sensitive receptors to excessive noise levels.



Table 3.H-10 Estimated Noise Level Changes on Local Roadways Due to Project – Existing Year

Roadway Segment	No Project		With Project		Project Related Increase CNEL (dBA)
	ADT	CNEL at 50 feet from centerline of outside lane (dBA)	ADT	CNEL at 50 feet from centerline of outside lane (dBA)	
Bear Springs Rd. north of SR-18	600	52.1	1,000	54.3	2.2
Daley Canyon Rd.					
Between SR-189 and Daley Canyon Access	6,360	62.4	7,940	63.3	1.0
Between Daley Canyon Access and SR-18	4,150	60.5	5,730	61.9	1.4
SR-173 north of SR-18	4,200	60.6	4,790	61.1	0.6
SR-18					
West of Lake Gregory	8,360	66.2	8,760	66.4	0.2
Between Lake Gregory and Bear Springs Rd.	9,800	66.9	10,790	67.4	0.4
Between Bear Springs Rd. and Project Access	9,760	66.9	11,140	67.5	0.6
Between Project Access and Daley Canyon Rd.	9,750	66.9	12,320	67.9	1.0
Between Daley Canyon Rd. and Daley Canyon Access	5,800	64.7	6,790	65.3	0.7
Between Daley Canyon Access and SR-173	5,920	64.7	6,710	65.3	0.5
East of SR-173	3,940	63.0	4,140	63.2	0.2
SR-189					
Between Grass Valley Rd. and Daley Canyon Rd.	4,850	57.7	5,440	58.2	0.5
Between Daley Canyon Rd. and North Bay Rd.	5,370	58.2	6,360	58.9	0.7
East of North Bay Rd.	4,050	56.9	4,640	57.5	0.6

Source: (HDR, 2018, Table 3-3, Table 5-4).



Threshold b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

1. Construction

Development of the Project would result in the generation of both steady and episodic groundborne vibration levels measurably above the ambient levels currently experienced near the sensitive vibration receptors located closest to the Project site. The highest reference PPV anticipated for the proposed Project site would be 0.210 PPV in/sec (94 VdB) in association with the on-site vibration rollers used during the fine grading and paving phases of construction, which would exceed the County's vibration standard of 0.20 in/sec. The closest sensitive receptors to the Project site are located within 90 feet west of the Project's proposed soccer field. At 90 feet, distance attenuation would reduce the construction vibration levels from 0.210 in/sec (94 VdB) to 0.031 in/sec (77 VdB), which would be below the County's vibration standard and FTA's daytime annoyance threshold but exceed the FTA's nighttime annoyance threshold of 72 VdB. Additionally, in accordance with Section 83.01.080(g)(3) of the County's Development Code, construction would take place between the hours of 7:00 A.M. and 7:00 P.M., except Sundays and Federal Holidays. As such, the Project's construction-related activities do not have the potential to exceed the FTA's nighttime vibration annoyance threshold and the Project's vibration impacts would be less-than-significant. (HDR, 2018, p. 29)

2. Operational Conditions

The proposed Project's intended uses are not typically associated with the generation excessive groundborne vibration. Long-term operational vibration generated from the Project site is anticipated to be predominately limited to vehicle-related sources. Rubber ties and suspension systems of on-road vehicles provide vibration isolation and noise reduction; therefore, it is unusual for on-road vehicles to cause groundborne vibration problems. Most problems with on-road vehicle related noise and vibration can be directly related to potholes, bumps, expansion joints, or other discontinuities in road surfaces. The Project would include roads with smooth pavement and would not result in significant groundborne vibration impacts from vehicular traffic. As such, operation of the Project would result in less-than-significant impacts related to groundborne vibration.

Threshold e) For a Project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project are to excessive noise levels?

Threshold f) For a Project within the vicinity of a private air strip, would the Project expose people residing or working in the Project are to excessive noise levels?

The Project site is located within a mountain community approximately 11.0 miles south of the Hesperia Airport and 25 miles northeast of the Ontario International Airport (HDR, 2018, p. 35). Based on the distance from the nearest airports, public airports or private airstrips noise would not affect the Project site. Therefore, impacts related to aircraft noise levels are considered less-than-significant.

3.H.8 CUMULATIVE IMPACTS

As shown on Figure 3.H-1, there are no past, present or probable future Projects within the Project area that are proximate enough to result in additive construction noise. In addition, the related Projects are located



sufficient distance from the subject property such that on-site noise produced by those Projects would not be additive to Project-related noise. However, traffic from related Projects, as well as ambient growth, would use the same roadways and be additive to Project-generated mobile noise sources. The cumulative analysis assumes an area-wide growth rate to reflect future development and redevelopment activities likely to occur in the general Project area. All build-out traffic volumes are as presented in the Project's traffic analysis (*Technical Appendix H*). Table 3.H-11, *Estimated Cumulative Noise Level Changes on Local Roadways Due to Project Future Year 2040*, compares cumulative Year 2040 traffic noise from the studied roadway segments both without and with Project implementation; and includes the cumulative noise increase of the buildout conditions.

Along the studied segments of Highway 18, Daley Canyon Road, and Highway 189, cumulative traffic noise would increase by approximately 0.1 to 1.9 dBA CNEL. Cumulative traffic volumes would result in a maximum increase of 1.9 dBA CNEL along the segment of Bear Springs Road north of Highway 18. This increase would be below the 3 dBA CNEL significance threshold for land uses within the "noise-impacted" category (see Table 3.H-2). Therefore, the proposed Project would result in a less-than-significant cumulative impacts associated with the Project's operation.



Table 3.H-11 Estimated Cumulative Noise Level Changes on Local Roadways Due to Project Future Year 2040

Roadway Segment	No Project		With Project		Project Related Increase CNEL (dBA)
	ADT (2040)	CNEL at 50 feet from centerline of outside lane (dBA)	ADT (2040)	CNEL at 50 feet from centerline of outside lane (dBA)	
Bear Springs Rd. north of SR-18	750	53.8	1,150	55.7	1.9
Daley Canyon Rd.					
Between SR-189 and Daley Canyon Access	7,620	63.9	9,200	64.7	0.8
Between Daley Canyon Access and SR-18	5,210	62.2	6,790	63.4	1.2
SR-173 north of SR-18	5,710	62.6	6,300	63.1	0.4
SR-18					
West of Lake Gregory	10,960	68.2	11,360	68.3	0.2
Between Lake Gregory and Bear Springs Rd.	12,400	68.7	13,390	69.0	0.3
Between Bear Springs Rd. and Project Access	12,330	68.7	13,710	69.1	0.5
Between Project Access and Daley Canyon Rd.	12,340	68.7	14,910	69.5	0.8
Between Daley Canyon Rd. and Daley Canyon Access	7,600	66.2	8,590	67.1	0.5
Between Daley Canyon Access and SR-173	8,260	66.9	9,050	67.3	0.4
East of SR-173	5,670	65.3	5,870	65.5	0.2
SR-189					
Between Grass Valley Rd. and Daley Canyon Rd.	5,490	59.0	6,080	59.5	0.4
Between Daley Canyon Rd. and North Bay Rd.	6,080	59.5	7,070	60.1	0.7
East of North Bay Rd.	4,440	58.1	5,030	58.6	0.5

Source: (HDR, 2018, Table 5-5, Table 5-6)



3.H.9 SIGNIFICANCE BEFORE MITIGATION

Threshold a, c, and d: Significant and Direct Construction-Related Impact and Less-than-Significant Operation-Related Impact. Temporary construction noise has the potential to generate noise levels above County standards that have the potential to affect nearby sensitive receptors located west of the Project site. During Project operation, the Project is not anticipated to generate noise above County standards nor expose sensitive receptors to excessive noise. The off-site noise level increase due to Project-related activities would not be perceptible by the human auditory system. Therefore, impacts would be less-than-significant during operation.

Threshold e and f: Less-than-Significant Impact. The Project site is not located within the vicinity of a public airport or private airstrip. As such, no significant noise impacts from public airports or private airstrips are anticipated to affect the Project site. Impacts would be less-than-significant.

Threshold b: Less-than-Significant Impact. The Project would not expose persons to excessive groundborne vibration during Project construction and Project operation. Additionally, the Project's anticipated land use is not typically associated with excessive vibration. However, mitigation would be implemented during Project construction to further reduce the Project's potential to expose sensitive receptors to excessive vibration. Impacts would be less-than-significant.

3.H.10 MITIGATION MEASURES

3.H.10.1 APPLICABLE COUNTY REGULATIONS AND DEVELOPMENT REQUIREMENTS

The following are applicable regulations and design requirements that will be imposed on the Project by San Bernardino County pursuant to the County's Development Code. Although, these requirements technically do not meet CEQA's definition for mitigation because they are regulatory requirements, they are specific herein to document required Project compliance with applicable County regulations.

- The Project will comply with the noise exemption requirements specified in the San Bernardino Development Code Section 83.01.080 related to construction activities.

3.H.10.2 MITIGATION MEASURES

MM-H1 Prior to the issuance of a grading permit, the County of San Bernardino Building Official shall ensure that the following notes are included on all grading plans and shall be enforced by the construction contractor during all excavation and grading activities:

1. During all site excavation and grading, the Construction Contractor shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers consistent with manufacturer's standards.
2. The Construction Contractor shall position all stationary construction equipment so that emitted noise is directed away from off-site residences nearest the Project site.



3. The Construction Contractor shall locate equipment staging within portions of the Project site that shall will create the greatest distance between construction-related noise sources and off-site residences nearest the Project site during all Project construction that considers the Project's 150-foot setback from SR-18.
4. Heavy construction activities, such as grading and/or compacting, that would occur within 300 feet of the western property line shall be restricted to the hours of 10:00 a.m. to 4:00 p.m.

3.H.11 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Threshold a, c, and d: Significant and Unavoidable. The Project would comply with restrictions on days and hours of construction activities specified in Section 83.01.080(g)(3) of the County's Development Code to limit the exposure of sensitive land uses in the Project area to construction noise. The incorporation of mitigation measures would limit the exposure of sensitive receptors to excessive noise levels; however, the mitigation would not reduce the peak construction noise levels to a level that would be below the significance threshold. Therefore, the Project's temporary impacts to sensitive receptors located approximately 90 feet west of the proposed soccer field during construction would be significant and unavoidable.



3.I TRANSPORTATION AND CIRCULATION

The following transportation and circulation analyses are based upon the Traffic Impact Analysis (TIA) prepared by Translutions, Inc., dated September 12, 2018 (Translutions, Inc., 2018). A copy of the TIA is provided in *Technical Appendix H* of this Draft Revised EIR (DREIR). The TIA evaluates the potential operating deficiencies of traffic and circulation facilities in the proposed Project's study area and identifies improvements that would be needed to relieve operational deficiencies. As directed by the County of San Bernardino, the TIA was prepared in accordance with the San Bernardino County Congestion Management Program (CMP) Guidelines for CMP Traffic Impact Analysis Reports (adopted November 3, 1993, and last revised in 2016), the California Department of Transportation (Caltrans), and consultation with County staff during the scoping process.

This Subsection also provides an analysis of potential effects on other modes of travel, including public transit, pedestrian, and bicycle modes. Transportation impacts are examined with respect to performance standards established by the County of San Bernardino and Caltrans, based on the locations of affected intersections.

3.I.1 ENVIRONMENTAL SETTING

3.I.1.1 EXISTING ROADWAY SYSTEM

Under existing conditions, the Project site is vacant and undeveloped and is not improved with any roadway facilities. State Route 18 (SR-18), a two-lane east-west oriented Mountain Major Highway, abuts the Project site to the south. Regional access to the Project site is provided by SR-18, State Route 330 (SR-330; located approximately 4.1 miles to the southeast), and State Route 138 (SR-138; located approximately 4.0 miles to the west). Local access to the Project site is also provided by Bear Springs Road, located approximately 500 feet to the west, and Daley Canyon Road, located approximately 137 feet to the east. (Google Earth Pro, 2018)

3.I.1.2 STUDY AREA DESCRIPTION

The CMP requires analysis of off-site intersections potentially affected by the Project, which the CMP defines as intersections where the Project would add 50 or more peak hour trips. Based on the scoping package prepared by Translutions, Inc. and approved by the County of San Bernardino staff, the TIA evaluated 18 intersections under eight (8) analysis scenarios, and proposes circulation improvements for intersections that operate or are forecast to operate at an unsatisfactory level of service (LOS). The scoping package provided an outline of the study area, the Project's calculated vehicular trip generation, trip distribution, and analysis methodology. The study area was then determined based on locations where the Project would contribute 50 or more peak hour trips (in accordance with the CMP), which includes 18 intersections, as described below:

- Intersection #1 – Crest Forest Drive/State Route 18;
- Intersection #2 – Lake Gregory Drive/State Route 189;
- Intersection #3 – Lake Gregory Drive/State Route 18;
- Intersection #4 – Bear Springs Road/State Route 18;
- Intersection #5 – Project Driveway/State Route 18;
- Intersection #6 – Lake Forest Drive/Grass Valley Road;
- Intersection #7 – State Route 189/Grass Valley Road;



- Intersection #8 – Daley Canyon Road/State Route 189;
- Intersection #9 – Daley Canyon Road/Daley Canyon Access Road;
- Intersection #10 – Daley Canyon Road/State Route 18;
- Intersection #11 – Daley Canyon Access Road/State Route 18;
- Intersection #12 – Bay Road/State Route 189;
- Intersection #13 – Bay Road/Little Bear Road;
- Intersection #14 – Rocky Point Road/State Route 189;
- Intersection #15 – Greenway Drive/State Route 189;
- Intersection #16 – State Route 173/Crest Estates Drive;
- Intersection #17 – State Route 173/State Route 18; and
- Intersection #18 – Pine Avenue/State Route 18.

Thus, any intersection or roadway segment located outside of the study area, and that would receive less than 50 peak hour Project-related trips, was determined to have no potential to be significantly impacted by the Project.

3.I.1.3 METHODOLOGIES FOR DETERMINING TRANSPORTATION FACILITY DEFICIENCIES

A. Level of Service (LOS)

LOS is a measure of the quality of operational conditions within a traffic stream, and is generally expressed in terms of such measures as speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience. Levels range from A to F, with LOS A representing excellent (free-flow) conditions and LOS F representing extreme congestion. Consistent with the County's guidelines, the TIA used the Highway Capacity Manual 6th Edition (HCM) delay methodologies as described in the Highway Capacity Manual (Transportation Research Board, Washington, D.C., November 2016) to evaluate LOS. Under the HCM methodology, LOS for signalized intersections is based on the average delay experienced by vehicles traveling through an intersection, whereas for un-signalized intersections, the LOS is based on the worst-case approach where the minor leg has a shared lane and on the worst-case movement where the minor leg has dedicated turn lanes. Table 3.I-1, *Levels of Service Criteria*, presents a brief description of each level of service letter grade, as well as the range of delays associated with each grade. (Translutions, Inc., 2018, pp. 9-10)

B. Levels of Service Thresholds

For intersections located within the jurisdiction of the County of San Bernardino, LOS C is the minimum LOS standard for intersection operations. Caltrans considers LOS D as the minimum LOS standard for all intersections under its jurisdiction. The following intersections are under the jurisdiction of the County of San Bernardino and therefore must maintain a LOS C or better for a sufficient operating condition: Intersection #6 – Lake Forest Drive/Grass Valley Road, Intersection #9 – Daley Canyon Road/Daley Canyon Access Road, and Intersection #13 – Bay Road/Little Bear Road. All remaining study area intersections are under the jurisdiction of Caltrans, and therefore must maintain a LOS D or better for a sufficient operating condition. (Translutions, Inc., 2018, p. 9)

LOS has been used as the basis for determining the significance of traffic impacts as standard practice in CEQA documents for decades. In 2013, California Senate Bill (SB) 743 was passed, which is intended to balance the



need for LOS for traffic planning with the need to build infill housing and mixed-use commercial developments within walking distance of mass transit facilities, downtowns, and town centers and to provide greater flexibility to local governments to balance these sometimes-competing needs. At full implementation of SB 743, the California Governor's Office of Planning and Research (OPR) is expected to replace LOS as the metric against which traffic impacts are evaluated, with a metric based on vehicle miles traveled (VMT). As a component of OPR's revisions to the CEQA Guidelines in December 2018, lead agencies will be required to adopt VMT thresholds of significance by July 2020. At the time this RDEIR was prepared, a VMT metric was not published by OPR, and the County of San Bernardino in its capacity as Lead Agency, as well as surrounding local agencies in which the Project's traffic would circulate, use LOS as the significance criteria for evaluating a Project's traffic impacts. For this reason, a LOS metric and not a VMT metric is appropriately used in this EIR.

3.I.1.4 ANALYSIS SCENARIOS

Based on coordination with Caltrans and County staff, the TIA analyzed traffic conditions for the following scenarios:

- Existing (2017) Conditions;
- Existing Plus Project Conditions;
- Opening Year (2018) Without Project Conditions;
- Opening Year (2018) With Project Conditions;
- Cumulative (2018) Without Project Conditions;
- Cumulative (2018) With Project Conditions;
- Year 2040 Without Project Conditions; and
- Year 2040 With Project Conditions.

The peak hours analyzed in the TIA were determined based on discussion between Translutions, Inc. and County staff and the unique operating characteristics of the Project. Since the majority of traffic generated by the Project on Saturday will be from the church's athletic field, the Saturday peak hour is defined as the one hour of highest traffic volumes occurring between 10:30 a.m. and 12:30 p.m. Furthermore, the majority of traffic generated by the Project on Sunday will be from the church facility. The Sunday peak hour is defined as the one hour of highest traffic volumes occurring between 7:00 a.m. and 11:00 a.m. (Translutions, Inc., 2018, p. 5)

A. Future Year Background Traffic

1. Opening Year (2018) Conditions

Opening year (2018) peak hour traffic volumes were developed by applying an annual 1.2 percent growth rate per year (2017 to 2018) to the existing volumes at each study intersection. The growth rate is based on the San Bernardino Traffic Analysis Model (SBTAM). Detailed volume development worksheets are included in Appendix B of the TIA (DREIR *Technical Appendix H*). (Translutions, Inc., 2018, p. 10)

2. Year 2040

Year 2040 peak hour traffic volumes were developed by applying an annual growth rate per year (2017 to 2040) to the existing volumes at each study intersection. The growth rate is based on the SBTAM weekday



growth between the base year (2008) and future year model (2040). A growth factor of 5 percent was added to cumulative (2018) traffic volumes to account for an increase in traffic volumes at several study area intersections from cumulative conditions to year 2040, which was based on the observation that year 2040 turn movement volumes were less than cumulative (2018) turn movement volumes at several study intersections. Detailed volume development worksheets are included in Appendix B of the TIA (DREIR *Technical Appendix H*). (Translutions, Inc., 2018, p. 10)

3.I.1.5 CUMULATIVE IMPACT ANALYSIS

CEQA Guidelines Section 15130 requires that an EIR disclose the impact from the Project along with the incremental impacts from closely-related past, present, and reasonably foreseeable future projects (i.e., cumulative impact analysis). As previously described in DREIR Subsection 1.6, *Cumulative Scenario*, the Project's potential cumulative traffic impacts analysis utilizes a summary of projections approach plus a list of projects approach in order to provide a conservative, overstated analysis of cumulative impacts. Data for the summary of projections approach was obtained from the sources previously described in DREIR Subsection 1.6. The list of eight (8) cumulative projects with the potential to add traffic to the same transportation facilities as the Project, as previously listed in DREIR Table 1-2, *Cumulative Development Land Use Summary*, was identified in consultation with planning and engineering staff from the County of San Bernardino based on their records of past, pending, and foreseeable future projects. Descriptive information about each project considered in the cumulative impact analysis can be found in Table 1-2, *Cumulative Development Land Use Summary*. The trip generation for cumulative projects was developed using rates from the ITE Trip Generation, 9th Edition and from previously completed traffic studies. The cumulative projects are anticipated to generate 300 Saturday peak hour trips, 260 Sunday peak hour trips, 1,340 Saturday daily trips, and 1,111 Sunday daily trips. (Translutions, Inc., 2018, p. 10)

3.I.2 EXISTING TRAFFIC CONDITIONS

3.I.2.1 EXISTING (2017) TRAFFIC VOLUMES

Existing traffic volumes were calculated based on peak hour intersection turn movement counts collected by National Data and Surveying Services in May 2017. Vehicle classification counts (e.g., passenger vehicle, 2-axle truck, 3-axle truck, and 4 or more axle truck), were conducted at the following study area intersections: Intersection #3 – Lake Gregory Drive/SR-18, Intersection #4 – Bear Springs Road/SR-18, Intersection #7 – SR-189/Grass Valley Road, Intersection #10 – Daley Canyon Road/SR-18, Intersection #12 – Bay Road/SR-189, Intersection #17 – SR-173/SR-18, and Intersection #18 – Pine Avenue/SR-18. Consistent with the CMP guidelines, passenger car equivalent (PCE) volumes at these intersections were computed using a PCE factor of 1.5 for 2-axle trucks, 2.0 for 3-axle trucks, and 3.0 for trucks with 4 or more axles. The percentage of trucks at the remaining intersections was determined from the classification counts at adjacent intersections. PCE volumes for these intersections were computed using a PCE factor of 2.5 for all trucks. (Translutions, Inc., 2018, p. 10)

Traffic volumes within the Project area typically fluctuate with seasonal variations; therefore, a seasonal adjustment factor was developed by comparing the latest Caltrans peak month traffic volumes to the average month traffic volumes. Caltrans peak month volumes were found to be 8.42 percent higher than the average month traffic volumes; therefore, the existing volumes were further increased by 8.42 percent to account for



the seasonal variation. Intersection turn movement count sheets are contained in Appendix A of the TIA (DREIR *Technical Appendix H*), and detailed volume development worksheets are included in Appendix B of the TIA (DREIR *Technical Appendix H*). (Translutions, Inc., 2018, p. 10)

3.I.2.2 EXISTING (2017) CONDITIONS INTERSECTION OPERATIONS ANALYSIS

An intersection LOS analysis was conducted for existing (2017) conditions to determine current circulation system performance. Figure 8 of the TIA (DREIR *Technical Appendix H*) illustrates the existing lane geometrics and stop controls at the study intersections. The existing Saturday and Sunday peak hour traffic volumes at study intersections are illustrated in Figure 9 of the TIA. Detailed volume development worksheets are included in Appendix B of the TIA. The existing LOS for the study area intersections are summarized in Table 3.I-2, *Existing Intersection Levels of Service*. LOS calculation worksheets are contained in Appendix C of the TIA. As shown in Table 3.I-2, under the Existing (2017) Analysis scenario, all study area intersections operate at satisfactory levels of service with the exception of the following (Translutions, Inc., 2018, p. 13):

- Intersection #4 – Bear Springs Road/State Route 18: LOS E (Saturday peak hour only).

3.I.2.3 EXISTING TRANSIT SERVICE

Public transit services in the Project vicinity are provided by Mountain Transit and are managed by Mountain Area Regional Transit Authority. Public transit routes in the Project area include the following:

- Rim Route 2, a fixed-route line that provides bus services which generally run east-west along SR-189, north-south along Daley Canyon Road, and east-west along SR-18.
- Rim of the Mountain, a fixed-route line that provides bus services which generally run east-west along SR-18, north-south along Daley Canyon Road, and northeast along SR-189.
- Rim Route 4, a fixed-route line that provides local bus services which generally run northeast along SR-173 and east-west along SR-18.

Dial-A-Ride also provides demand-response transit services throughout the Project area, including the communities of Rimforest, Twin Peaks, Lake Arrowhead, and Skyforest. Public transit service routes are depicted on Figure 7 of the TIA (DREIR *Technical Appendix H*). (Translutions, Inc., 2018, pp. 12-14)

3.I.2.4 EXISTING PEDESTRIAN AND BICYCLE FACILITIES

The Project site is currently vacant with no sidewalks or bike lanes in the vicinity. Figure 14 of the TIA (DREIR *Technical Appendix H*) depicts existing and planned bike lanes in the Project area. Figure 14 indicates a Class II bike lane is planned along Daley Canyon Road to the east of the Project site, along SR-18 to the south of the Project site, and along Bear Springs Road to the west of the Project site. Figure 15 of the TIA does not depict any existing bike lanes in the Project vicinity. (Translutions, Inc., 2018, Figure 14)



3.I.3 REGULATORY FRAMEWORK

3.I.3.1 REGIONAL

A. SCAG Regional Transportation Plan (RTP)

The Southern California Association of Governments (SCAG) is a regional agency established pursuant to California Government Code Section 6500, also referred to as the Joint Powers Authority law. SCAG is designated as a Council of Governments (COG), a Regional Transportation Planning Agency (RTPA), and a Metropolitan Planning Organization (MPO). The Project site is within SCAG's regional authority. On April 7, 2016, SCAG adopted the *2016-2040 Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS)* with goals to: 1) preserve the existing transportation system; 2) expand the regional transit system; 3) expand passenger rail; 4) improve highway and arterial capacity; 5) managing demands on the transportation system; 6) optimizing the performance of the transportation system; 7) promoting forms of active transportation; 8) strengthening the regional transportation network for goods movement; 9) leveraging technology; 10) improving airport access; and 11) focusing new growth around transit (SCAG, 2016a, pp. 6-8). (SCAG, 2016a, pp. 6-8).

B. San Bernardino County Congestion Management Program (CMP)

The *San Bernardino County CMP* was prepared by the San Bernardino Associated Governments (SANBAG). The *CMP's* intent is to more directly link land use, transportation, and air quality planning and to prompt reasonable growth management programs that would more effectively utilize new and existing transportation funds to alleviate traffic congestion and related impacts and improve air quality. The *San Bernardino CMP* was first adopted in November 1992 and was most recently comprehensively updated in June 2016. The San Bernardino County CMP is implemented by the San Bernardino County Transportation Authority (SBCTA). There are no San Bernardino County CMP roadway facilities within the Project area, and none of the study area intersections are CMP facilities. Forecast traffic volumes at study intersections were developed consistent with CMP guidelines. Additionally, the TIA was prepared in a manner to satisfy the requirements for a TIA established by the CMP.

C. San Bernardino County Measure "I"

Measure "I", a one-half of one percent sales tax on retail transactions through the year 2040, was approved by San Bernardino County voters. The revenue generated by Measure "I" is to be used to fund transportation projects including, but not limited to, roadway improvements, commuter rail, public transit, and other identified improvements. Measure "I" requires that a local traffic impact fee be created to ensure that development projects are paying a fair share for transportation projects from which they would benefit (see discussion of "City of San Bernardino Development Impact Fee", below). Revenues collected through local traffic impact fee programs are used in tandem with regional Measure "I" revenues to fund projects identified in the SANBAG Development Mitigation Nexus Study (included as Appendix G to the *San Bernardino County CMP*).

D. San Bernardino County General Plan Circulation and Infrastructure Element

The County of San Bernardino's General Plan Circulation and Infrastructure Element is intended to guide the development of the County's circulation system in a manner that is compatible with the County's General Plan



Land Use Element. To help meet traffic demands and achieve balanced growth, the County has adopted specific goals and policies, which serve as the basis for the Circulation and Infrastructure Element. Refer to Figure CI-2 of the County of San Bernardino General Plan Circulation and Infrastructure Element for an illustration of the major roads and freeways within the Mountain Region of the County (San Bernardino County, 2007a, Figure CI-2).

3.I.4 THRESHOLDS OF SIGNIFICANCE

The proposed Project would result in a significant impact to the transportation/circulation system if the Project or any Project-related component would:

- a. *Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit;*
- b. *Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or roadways;*
- c. *Result in a change in air traffic patterns, including an increase in traffic levels or a change in location that results in substantial risks;*
- d. *Substantially increase hazards due to design feature (e.g., sharp curves of dangerous intersections) or incompatible uses (e.g., farm equipment);*
- e. *Result in inadequate emergency access; or*
- f. *Conflict with adopted policies, plans or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks) supporting alternative transportation.*

The above-listed thresholds are derived directly from Section XVI of Appendix G to the CEQA Guidelines and address development projects' typical adverse effects related to transportation and traffic (OPR, 2009).

The specific criteria described below are utilized to evaluate the significance of potential traffic impacts under Thresholds "a" and "b," and are based on applicable Caltrans and *San Bernardino County CMP* performance standards.

3.I.4.1 SIGNIFICANCE CRITERIA

A. Intersections

For study-area intersections under the jurisdiction of the County of San Bernardino, a significant directly and cumulatively considerable impact would occur if the pre-Project conditions operate at or better than LOS C (i.e., acceptable LOS) and the addition of Project trips causes the peak hour LOS of the study-area intersections to operate at unacceptable LOS (i.e., LOS D or worse). (Translutions, Inc., 2018, p. 9)



For study-area intersections under the jurisdiction of Caltrans, a significant direct impact would occur if the pre-Project conditions operate at or better than LOS D and the addition of the Project trips causes the peak hour LOS of the study-area intersections to operate at unacceptable LOS (i.e., LOS E or worse). (Translutions, Inc., 2018, p. 9)

For study-area intersections under the jurisdiction of Caltrans, a cumulatively considerable impact would occur if the Project would contribute 50 or more peak hour trips to a study-area intersection that operates at LOS D or worse under pre-Project conditions.

3.I.5 IMPACTS ANALYSIS

The roadway improvements proposed by the Project are described in DREIR Section 2.0, *Project Description*; the construction of these improvements would be ensured as part of the Project's conditions of approval issued by the County of San Bernardino in association with the Project's approval process. The construction of the Projects proposed roadway improvements, including driveway connections, is assumed throughout the analysis presented in the TIA (DREIR *Technical Appendix H*) and summarized in this Subsection.

Threshold a) Would the Project conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

The analysis provided under Threshold a) focuses on potential impacts to the local circulation system (i.e., intersections) in accordance with applicable County of San Bernardino and Caltrans significance thresholds. Refer to Threshold b) for an analysis of potential impacts to the San Bernardino County CMP roadway network in accordance with applicable CMP significance thresholds.

1. *Project Vehicle Trip Generation*

Vehicle trip generation represents the amount of traffic that is both attracted to and produced by a development project. Determining traffic generation for a specific project is, therefore, based upon forecasting the amount of traffic that is expected to be both attracted to and produced by the specific land uses proposed by a given project.

Trip generation for the Project is based on trip generation rates from the ITE Trip Generation (9th Edition) and are based on Land Use 560 - "Church" and Land Use 488 "Soccer Complex." Table 3.I-3, *Project Trip Generation*, shows the calculation of the Project trip generation for Saturday and Sunday conditions. As shown in Table 3.I-3, the Project is forecast to generate 390 peak hour trips on Saturday, 394 peak hour trips on Sunday, 657 daily trips on Saturday, and 1,112 daily trips on Sunday. (Translutions, Inc., 2018, p. 5)

2. *Project Vehicle Trip Distribution*

Trip distribution is the process of identifying the probable destinations, directions, or traffic routes that will be utilized by a project's traffic. The potential interaction between a project's land uses and surrounding regional access routes are considered to identify the route where a project's traffic would distribute. Trip distribution patterns for the proposed Project were developed based on location of local and regional destinations and in



consultation with County staff. The Project trip generation for Saturday and Sunday peak hour conditions (refer to Table 3.I-3) was applied to the trip distribution patterns for the proposed Project to develop the trip assignment for new Project trips. Figure 3.I-1, *Project Trip Distribution*, shows the trip distribution for Project trips and Figure 5 of the TIA (DREIR *Technical Appendix H*) shows the Project trip assignment at the study intersections.

3. *Impact Analysis for Short-Term Construction-Related Traffic*

During the Project's construction phase, traffic to-and-from the Project site would be generated by activities such as construction employee trips, construction materials deliveries, and the use/delivery of heavy equipment.

Vehicular traffic associated with construction employees would be substantially less than daily and peak hour traffic volumes generated during Project's operational activities, especially because construction activities typically begin/end outside of peak hours. Accordingly, a majority of the construction employees would not be driving to/from the Project site during hours of peak congestion. Traffic from construction workers is not expected to result in a substantial adverse effect to Project study area intersections because most trips would occur during non-peak hours and the total volume of trips would be less than the Project's operational trips, which are shown to result in a less-than-significant impact in the following Subsection.

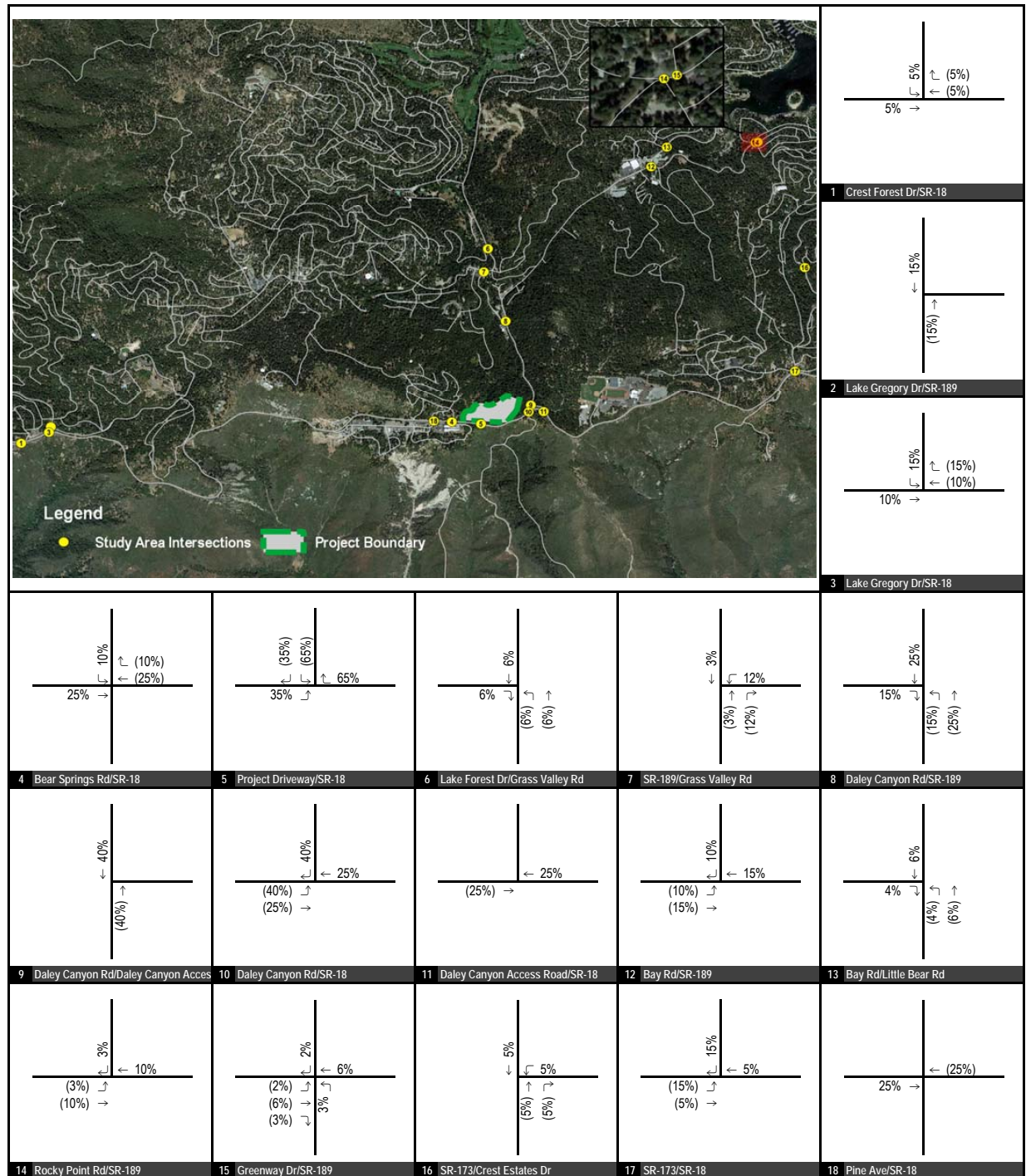
Construction materials deliveries to the Project site also would also have a nominal effect to Project study area intersections. Construction materials would be delivered to the site throughout the construction phase based on need and would not occur on an everyday basis. Furthermore, many construction materials deliveries would occur during non-peak hours. The total daily number of construction materials deliveries to the Project site are expected to be well below the Project's operational trips.

Heavy equipment would be utilized on the Project site during the construction phase. As most heavy equipment is not authorized to be driven on public roadways, most equipment would be delivered and removed from the site via flatbed trucks (sometimes with multiple pieces of equipment delivered to the site on a single trip). As with the delivery of construction materials, the delivery of heavy equipment to the Project site would not occur on a daily basis, but would occur periodically throughout the construction phase based on need. As described in DREIR Section 2.0, *Project Description*, only up to 9 pieces of construction equipment are expected on the Project site during any given phase of construction; therefore, deliveries of construction equipment to the Project site is not expected to generate substantial traffic.

On-site traffic signing would be required to be implemented in conjunction with detailed construction plans for the Project site. Sight distance at the Project's construction access point would be reviewed by the County of San Bernardino to assure compliance with standard Caltrans and County of San Bernardino design standards at the time of preparation of final grading plans. Compliance with applicable design standards for the proposed Project driveways would ensure that the proposed site access improvements would not result in safety hazards for motorists entering/exiting the site along SR-18.



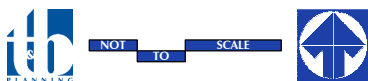
Accordingly, traffic generated by the Project's construction phase would not result in a conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system. Impacts during the Project's construction phase would be less than significant.



XX%(YY%) Inbound%(Outbound%) Distribution

Source(s): Translutions, Inc. (08-23-2017)

Figure 3.I-1



PROJECT TRIP DISTRIBUTION



4. *Impact Analysis for Existing Plus Project Traffic Conditions*

The peak hour LOS at Project study area intersections under the Existing Plus Project scenario is summarized in Table 3.I-2, *Existing Intersection Levels of Service*. As shown in Table 3.I-2, all study area intersections would operate at acceptable LOS under Existing Plus Project traffic conditions except for the following:

- Intersection #4 – Bear Springs Road/State Route 18: LOS F (Saturday peak hour), LOS E (Sunday peak hour); and
- Intersection #18 – Pine Avenue/State Route 18: LOS E (Saturday peak hour only).

As shown on Table 3.I-2, Intersection #4 – Bear Springs Road/State Route 18 operates at a deficient level of service (LOS E during Saturday peak hour) under Existing (2017) Without Project conditions. As Intersection #4 operates at unsatisfactory conditions in the existing condition, the addition of Project trips would result in an increase in the severity of the unsatisfactory conditions. Therefore, the Project would result in a cumulatively considerable impact to Intersection #4 – Bear Springs Road/State Route 18.

Intersection #18 – Pine Avenue/State Route 18 would operate at an acceptable level of service (LOS D or better) under Existing (2017) traffic conditions, but the contribution of traffic generated by the proposed Project would result in Intersection #18 operating at a deficient LOS (LOS E) under Existing Plus Project Conditions. Therefore, in accordance with the significance criteria established in subsection 3.I.4.1, the Project would result in a significant direct impact to Intersection #18 – Pine Avenue/State Route 18 under the Existing Plus Project scenario.

5. *Impact Analysis for Opening Year (2018) Traffic Conditions*

The peak hour LOS at Project study area intersections under the Opening Year (2018) scenario is summarized in Table 3.I-4, *Opening Year (2018) Intersection Levels of Service*. As shown in Table 3.I-4, all study area intersections would operate at acceptable LOS under the Opening Year (2018) Without Project scenario except for the following:

- Intersection #4 – Bear Springs Road/State Route 18: LOS F (Saturday peak hour), LOS E (Sunday peak hour); and
- Intersection #18 – Pine Avenue/State Route 18: LOS E (Saturday peak hour only).

As shown on Table 3.I-4, Intersection #4 – Bear Springs Road/State Route 18 would operate at a deficient level of service (LOS E) during the Saturday peak hour under the Opening Year (2018) without Project scenario and would operate at a deficient level of service (LOS F and LOS E) during both peak hours under the Opening Year (2018) with Project scenario. Although the Project would not create the deficiency at the intersection, the Project would contribute additional trips which would further reduce the intersection's LOS thereby incrementally increasing the severity of the deficiency at Intersection #4. Therefore, the Project would result in a cumulatively considerable impact to Intersection #4.

As shown on Table 3.I-4, under the Opening Year (2018) Without Project scenario, Intersection #18 – Pine Avenue/State Route 18 would operate at an acceptable LOS, but the contribution of traffic generated by the proposed Project would result in Intersection #18 operating at a deficient LOS (LOS E) under the Opening



Year (2018) With Project scenario. Therefore, in accordance with the significance criteria established in subsection 3.I.4.1, the Project would result in a significant direct impact to Intersection #18 – Pine Avenue/State Route 18 under the Opening Year (2018) Without Project scenario.

6. *Impact Analysis for Cumulative (2018) Traffic Conditions*

The peak hour LOS at Project study area intersections under the Cumulative (2018) scenario is summarized in Table 3.I-5, *Cumulative (2018) Intersection Levels of Service*. As shown in Table 3.I-5, all study area intersections would operate at acceptable LOS under the Cumulative (2018) Without Project scenario except for the following:

- Intersection #4 – Bear Springs Road/State Route 18: LOS F (Saturday and Sunday peak hours); and
- Intersection #17 – State Route 173/State Route 18: LOS F (Saturday peak hour only);

As shown on Table 3.I-5, under the Cumulative (2018) Without Project scenario, Intersection #4 – Bear Springs Road/State Route 18 would operate at a deficient level of service (LOS E) during peak hours. Therefore, the addition of the traffic generated by the proposed Project would increase the severity of the impact at Intersection #4, resulting in a cumulatively considerable impact at Intersection #4. Additionally, under the Cumulative (2018) Without Project scenario, Intersection #17 – State Route 173/State Route 18 would operate at a deficient level of service (LOS E) during the Saturday peak hour and the addition of the traffic generated by the proposed Project would increase the severity of the impact at Intersection #17. Therefore, impacts would be cumulatively considerable at Intersection #17.

As shown on Table 3.I-5, under the Cumulative (2018) Without Project scenario, Intersection #8 – Daley Canyon Road/State Route 18 would operate at an acceptable LOS without the contribution of Project traffic. The addition of the traffic generated by the proposed Project and other cumulative projects would result in a deficiency (LOS E) at Intersection #8 during the Saturday peak hour. Accordingly, the Project would result in a cumulatively considerable impact on Intersection #8 under the Cumulative (2018) scenario.

As shown on Table 3.I-5, under the Cumulative (2018) Without Project scenario, Intersection #10 – Daley Canyon Road/State Route 18 would operate at an acceptable LOS without the contribution of Project traffic. The addition of the traffic generated by the proposed Project and other cumulative projects would result in a deficiency (LOS E) at Intersection #10 during the Sunday peak hour. Accordingly, the Project would result in a cumulatively considerable impact on Intersection #10 under the Cumulative (2018) scenario.

As shown on Table 3.I-5, under the Cumulative (2018) Without Project scenario, Intersection #18 – Pine Avenue/State Route 18 would operate at an acceptable LOS without traffic generated by the proposed Project. The addition of the traffic generated by the proposed Project and other cumulative projects would result in a deficiency (LOS E) at Intersection #18 during the Saturday peak hour. Accordingly, the Project would have a cumulatively considerable impact on Intersection #18 under the Cumulative (2018) scenario.



7. Impact Analysis for Year 2040 Traffic Conditions

The peak hour LOS at Project study area intersections under the Year 2040 scenario is summarized in Table 3.I-6, *Year 2040 Intersection Levels of Service*. As shown in Table 3.I-6, all study area intersections would operate at acceptable LOS under the Year 2040 Without Project scenario except for the following:

- Intersection #4 – Bear Springs Road/State Route 18: LOS F (Saturday and Sunday peak hours);
- Intersection #17 – State Route 173/State Route 18: LOS F (Saturday peak hour only); and
- Intersection #18 – Pine Avenue/State Route 18: LOS F (Saturday peak hour only).

As shown on Table 3.I-6, under the Year 2040 Without Project scenario, Intersection #4 – Bear Springs Road/State Route 18, Intersection #17 – State Route 173/State Route 18, and Intersection #18 – Pine Avenue/State Route 18 would operate at a deficient level of service during at least one of the peak hours. Therefore, the addition of the Project would contribute traffic trips that would increase the severity of the deficiencies that occur at Intersections #4, #17, and #18 under the Year 2040 scenario. Accordingly, the implementation of the Project would result in cumulatively considerable impacts to these three intersections.

As shown on Table 3.I-6, under the Year 2040 Without Project scenario, Intersection #8 – Daley Canyon Road/State Route 18 would operate at an acceptable LOS without the proposed Project. The addition the traffic generated by the proposed Project and other cumulative projects would result in a deficiency (LOS E) at Intersection #8 during the Saturday peak hour. Accordingly, the Project would have a cumulatively considerable impact on Intersection #8 under the Year 2040 scenario.

As shown on Table 3.I-6, under the Year 2040 Without Project scenario, Intersection #10 – Daley Canyon Road/State Route 18 would operate at an acceptable LOS without the proposed Project. The addition of the traffic generated by the proposed Project and other cumulative projects would result in a deficiency (LOS E during the Saturday peak hour / LOS F during the Sunday peak hour) at Intersection #10. Accordingly, the Project would have a cumulatively considerable impact on Intersection #10 under the Year 2040 scenario.

As shown on Table 3.I-6, under the Year 2040 Without Project scenario, Intersection #11 – Daley Canyon Access Road/State Route 18 would operate at an acceptable LOS without the proposed Project. The addition of the traffic generated by the proposed Project and other cumulative projects would result in a deficiency (LOS E) during the Saturday peak hour at Intersection #11. Accordingly, the Project would have a cumulatively considerable impact on Intersection #11 under the Year 2040 scenario.

Threshold b) Would the Project conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or roadways?

The Project's TIA (DREIR *Technical Appendix H*) was prepared in order to satisfy the requirements for a TIA established by the San Bernardino County CMP. The CMP requires analysis of off-site intersections potentially affected by a development project, which the CMP defines as intersections at which a project is forecast to add 50 or more peak hour trips. The Project's traffic-related impacts to the 18 study area intersections are evaluated under Threshold a) above. The intersections of Lake Forest Drive/Grass Valley



Road (Intersection #6), Daley Canyon Road/Daley Canyon Access Road (Intersection #9), and Bay Road/Little Bear Road (Intersection #13) are under the Jurisdiction of San Bernardino County and the remaining 15 intersections are under the jurisdiction of Caltrans. As discussed above, the Project would result in significant direct impacts to two (2) study area intersections (Intersection #4 and Intersection #18) under the Existing Plus Project scenario, and would result in cumulatively considerable impacts to several intersections under the Opening Year (2018), Cumulative (2018), and Year 2040 scenarios. However, the proposed Project would result in less-than-significant impacts to the intersections subject to County jurisdictions as part of the CMP (Intersections #6, #9, and #13). Based on the foregoing, the proposed Project would result in less-than-significant impacts to the County's CMP facilities within the study area.

Threshold c) Would the Project result in a change in air traffic patterns, including an increase in traffic levels or a change in location that results in substantial risks?

The Project does not contain an air travel component (e.g., runway, helipad, etc.); thus, air traffic volumes would not be changed as a result of the Project. Additionally, the Project site is not located within the vicinity of an airport, airstrip, or helipad. The nearest airport to the Project site is the Hesperia Airport, located approximately 11.0 miles north of the Project site (Google Earth Pro, 2018). The Project does not propose a use that would interfere with aviation operations at the Hesperia Airport, the Project has no potential to interfere with air traffic patterns or increase air traffic levels at the Hesperia Airport. The Ontario International Airport is located approximately 25.0 miles to the southwest of the Project site (Google Earth Pro, 2018). The Project site is not located within the Airport Influence Area (AIA) depicted on Map 2-1 of the Ontario International Airport Land Use Compatibility Plan, nor is the Project site located within the conical surface areas depicted on Figure 1-21A of the Ontario International Airport Land Use Compatibility Plan. (City of Ontario, 2012) Therefore, development on the Project site would not affect operations at the Ontario International Airport. Furthermore, there are no apparent private helipads in the Project site vicinity (Google Earth Pro, 2018). The Project proposes to develop the site with a 600-seat church building, gymnasium, sports field, and sports courts, which is expected to serve the local community and not generate any measurable additional demand for air travel that could result in an increase air traffic levels. Based on the foregoing, the Project would not have the potential to affect air traffic patterns, including an increase in traffic levels or a change in flight path location that results in substantial safety risks. Impacts would be less-than-significant.

Threshold d) Would the Project substantially increase hazards due to design feature (e.g., sharp curves of dangerous intersections) or incompatible uses (e.g., farm equipment)?

The Project proposes a signalized driveway along SR-18 that would accommodate ingress and egress from the Project site; a network of internal drive aisles and parking lots; and an additional driveway to the east of the Project driveway that would be restricted to emergency access vehicles. The Project would also widen SR-18 for approximately 300 feet upstream and downstream of the Project driveway to include an eastbound left-turn lane and westbound deceleration/acceleration lane. All improvements proposed by the Project within public rights-of-ways would be installed in conformance with Caltrans and County of San Bernardino design standards. The County of San Bernardino Public Works Department reviewed the Project's application materials (refer to DREIR Section 2.0, *Project Description*) and determined that no hazardous transportation design features would be introduced by the Project.



Local access is provided to the Project site by SR-18, Lake Gregory Drive, SR-189, Daley Canyon Road, Grass Valley Road, and SR-173 (Translutions, Inc., 2018, p. 13). With approval of the proposed Conditional Use Permit (CUP) P201700270, the Project would be consistent with the existing “Community Industrial (IC)” General Plan land use designation applicable to the Project site, and would also be compatible with existing and planned commercial, residential, and resource conservation land uses located adjacent to the Project site. The proposed Church of the Woods facility would not include any components that would result in incompatible uses on roadways, including heavy equipment or farm equipment, etc. There is no evidence that traffic hazards would increase. Therefore, impacts are considered less than significant.

Threshold e) Would the Project result in inadequate emergency access?

The County of San Bernardino reviewed the Project’s design to ensure that adequate access to-and-from the Project site would be provided for emergency vehicles. As described above, the Project would provide a driveway to the east of the proposed Project’s main driveway on SR-18 that would be restricted to emergency access vehicles. Furthermore, the County would review all future Project construction drawings to ensure that adequate emergency access is maintained along abutting public streets during temporary construction activities. With required adherence to County requirements for emergency vehicle access. Therefore, impacts would be less-than-significant.

Threshold f) Would the Project conflict with adopted policies, plans or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks) supporting alternative transportation?

As described in subsection 3.I.2.3 above, the Project area is currently served by bus services operated by the Mountain Area Regional Transit Authority. Existing transit routes in the Project vicinity are illustrated on Figure 6 of DREIR *Technical Appendix H*. Under existing conditions, there is no transit route that serves the Project site; however, the Rim of the Mountain bus route runs along SR-18 to the immediate south of the Project site. The nearest bus stop is located approximately 500 feet to the west-southwest of the Project site. The proposed Project does not include any components that would impede operation of bus service, and would therefore not decrease performance or safety of such facilities. (Translutions, Inc., 2018, pp. 13-15)

As described in subsection 3.I.2.4 above, under existing conditions the Project site is undeveloped and does not contain any pedestrian or bicycle facilities. There are no existing or planned pedestrian facilities in the vicinity of the Project site. The proposed Project is designed to encourage pedestrian movement and enhance connectivity within the Project site through the incorporation of pedestrian facilities that includes the construction of sidewalks throughout the Project site. Accordingly, the Project would not conflict with any existing or planned pedestrian facilities.

Figure 14 of the TIA (DREIR *Technical Appendix H*) depicts planned bike lanes for the County of San Bernardino. Figure 14 indicates a Class II bike lane is planned along Daley Canyon Road to the east of the Project site, along SR-18 to the south of the Project site, and along Bear Springs Road to the west of the Project site. The intersection and roadway improvements along SR-18 that are proposed as a component of the Project have been reviewed by San Bernardino County staff and determined to meet all applicable County requirements associated with bike lanes.



Furthermore, the San Bernardino County Planning Department conducted a review of the proposed Project, and determined that the Project would comply with, or otherwise would not conflict with, policies, plans, or programs regarding public transit, bikeways, or pedestrian facilities. Additionally, the Project has no potential to otherwise decrease the performance or safety of public transit, bikeways, or pedestrian facilities. As such, impacts would be less than significant.

3.I.6 CUMULATIVE IMPACT ANALYSIS

The analysis under Threshold a) disclosed the Project's potential to affect the transportation network on a direct and cumulative basis. Accordingly, the proposed Project would result in cumulatively considerable impacts in the Year 2018 Existing Plus Project Scenario at Intersection #4- Bear Springs Road/State Route 18 and in Year 2018 Cumulative scenario at Intersection #4- Bear Springs Road/State Route 18, Intersection #8 – Daley Canyon Road/State Route 18, Intersection #10 – Daley Canyon Road/State Route 18, Intersection #18 – Pine Avenue/State Route 18, and Intersection #17 – State Route 173/State Route 18.

Under the Year 2040 scenario, the Project would result in cumulatively considerable impacts at Intersection #4 – Bear Springs Road/State Route 18, Intersection #8 – Daley Canyon Road/State Route 18, Intersection #10 – Daley Canyon Road/State Route 18, Intersection #11 – Daley Canyon Access Road/State Route 18, Intersection #17 – State Route 173/State Route 18, and Intersection #18 – Pine Avenue/State Route 18.

The analysis under Threshold b) evaluated the Project's potential to result in substantial adverse effects to the San Bernardino County CMP roadway network. As concluded under Threshold b), none of the 18 study area intersections that were evaluated in the Project-specific TIA (DREIR *Technical Appendix H*) are CMP facilities. Therefore, the Project would have no potential to result in a cumulatively considerable impact with respect to a conflict with the San Bernardino County CMP.

The Project would not contribute to a significant cumulative impact under the topics discussed under Thresholds c), d), and e) because the Project would not change air traffic patterns; cause or exacerbate existing transportation design safety concerns; or adversely affect emergency access.

As presented under Threshold f), the proposed Project would not conflict with adopted policies or programs regarding public transit, bicycle, or pedestrian facilities and thus has no potential to contribute to a cumulative impact. The Project would not result in a cumulatively considerable impact with respect to adopted policies and programs regarding public transit, bicycle, and pedestrian facilities, nor would it result in a cumulatively considerable impact on the performance of such facilities.

3.I.7 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION

Threshold a): Significant Direct and Cumulatively Considerable Impact. The Project would result in a significant direct impact to Intersection #18 and a significant cumulatively considerable impact to Intersection #4 under the Existing Plus Project scenario. Under the Opening Year (2018) scenario, the Project would result in a direct impact at Intersection #18 – Pine Avenue/State Route 18. Under the Cumulative (2018) scenario, the Project would result in cumulatively considerable impacts at Intersection #8 – Daley Canyon Road/State Route 189, Intersection #10 – Daley Canyon Road/State Route 18, Intersection #18 – Pine



Avenue/State Route 18, Intersection #4 – Bear Springs Road/State Route 18, and Intersection #17 – State Route 173/State Route 18. Under the Year 2040 scenario, the Project would result in cumulatively considerable impacts at Intersection #8 – Daley Canyon Road/State Route 18, Intersection #10 – Daley Canyon Road/State Route 18, Intersection #11 – Daley Canyon Access Road/State Route 18, Intersection #4 – Bear Springs Road/State Route 18, Intersection #17 – State Route 173/State Route 18, and Intersection #18 – Pine Avenue/State Route 18.

Threshold b): Less-than-Significant Impact. The Project would not result in direct or cumulative impacts to any of the three intersections under the jurisdiction of San Bernardino County Lake Forest Drive/Green Valley Road (Intersection #6), Daley Canyon Road/Daley Canyon Access Road (Intersection #9), and Bay Road/Little Bear Road (Intersection #13). Therefore, the Project would not substantially impact the County's CMP facilities or conflict with CMP performance standards under any analysis scenario.

Threshold c): Less-than-Significant Impact. The proposed Project does not include an air travel component and would not affect local air traffic levels. In addition, the Project would not introduce any physical features that would alter or obstruct air traffic patterns. Impacts are considered less-than-significant.

Threshold d): Less-than-Significant Impact. The proposed Project would not substantially increase transportation safety hazards due to incompatible uses or design features. Impacts are considered less-than-significant.

Threshold e): Less-than-Significant Impact. Adequate emergency access would be provided to the Project site during both short-term construction and long-term operation. The Project would not result in inadequate emergency access to the site or surrounding properties. Impacts are considered less-than-significant.

Threshold f): Less-than-Significant Impact. The Project is consistent with adopted policies and programs regarding public transit, bicycle, and pedestrian facilities, and is designed to minimize potential conflicts with non-vehicular means of transportation. Impacts are considered less-than-significant.

3.I.8 MITIGATION

Applicable County Regulatory Requirements

There are no applicable regulatory requirements for the proposed Project.

Mitigation for Impacts Occurring under the Existing Plus Project Scenario

MM 3.I-1 Prior to issuance of an occupancy permit for the Project, the San Bernardino County Director of Public Works or their assignee shall verify that the Project Applicant has made a good faith effort to gain the approval of Caltrans to implement the intersection improvements identified below in accordance with the recommendations identified in the Traffic Impact Analysis (TIA) prepared by Translutions, Inc., dated September 12, 2018. If Caltrans approval is granted, the Project Applicant shall be responsible for ensuring installation of the traffic signals.

- Intersection #4 – Bear Springs Road/State Route 18: install a traffic signal at the intersection.



- Intersection #18 – Pine Avenue/State Route 18: install a traffic signal at the intersection.

Mitigation for Cumulatively Considerable Impacts

MM 3.I-2 In the event that Caltrans prepares a valid study, as defined below, that identifies fair share contribution funding sources attributable to and paid from private and public development to supplement other regional and State funding sources necessary undertake improvements to intersections along SR-18 and/or SR-189 in the Project study area, then the Project Applicant shall use reasonable efforts to pay the applicable fair share amount to Caltrans for the below-listed intersections.

The study shall include fair share contributions related to private and/or public development based on nexus requirements contained in the Mitigation Fee Act (Government Code Sections 66000 et seq.) and 14 Cal. Code of Regs. Section 15126.4(a)(4) and, to this end, the study shall recognize that impacts to Caltrans SR-18 and/or SR-189 facilities that are not attributable to development located within unincorporated San Bernardino County that are not required to pay in excess of such developments' fair share obligations. The fee study shall also be compliant with Government Code Section 66001(g) and any other applicable provisions of law. The study shall set forth a timeline and other relevant criteria for implementation of the recommendations contained within the study to the extent the other agencies agree to participate in the fee study program. Specifically, the fair share fee payment required by this Mitigation Measure shall be used by Caltrans to make the following improvements in accordance with the recommendations identified in the Traffic Impact Analysis (TIA) prepared by Translutions, Inc., dated September 12, 2018:

- Daley Canyon Road/State Route 189 (Intersection #8): install a traffic signal at the intersection. The Project's fair share of this improvement shall be 58.7%
- Daley Canyon Road/State Route 18 (Intersection #10): install a traffic signal at the intersection. The Project's fair share of this improvement shall be 48.3%.
- Daley Canyon Access Road/State Route 18 (Intersection #11): install a traffic signal at the intersection. The Project's fair share of this improvement is 30.3%.
- State Route 173/State Route 18 (Intersection #17): install a traffic signal at the intersection. The Project's fair share of this improvement is 22.0%.
- Pine Avenue/State Route 18 (Intersection #18): install a traffic signal at the intersection. The Project's fair share of this improvement is 32.3%.

3.I.9 SIGNIFICANCE OF IMPACTS AFTER MITIGATION

Threshold a: Significant and Unavoidable Direct and Cumulatively Considerable Impacts. Provided below is a summary of the significance of the Project's impacts to transportation and traffic following implementation of the Applicable County Regulatory Requirements and Mitigation Measures MM 3.I-1 and MM 3.I-2.



Existing Plus Project Scenario

Mitigation Measure MM 3.I-1 would require the Project to construct traffic signals at the intersections of Bear Springs Road/State Route 18 (Intersection #4) and Pine Avenue/State Route 18 (Intersection #18) if permitted by Caltrans. As shown on Table 3.I-7, *Existing Plus Project with Improvements Intersection Levels of Service*, implementation of Mitigation Measure MM 3.I-1 would fully reduce to the Project's direct impacts to Intersection #4 and the Project's direct impacts to Intersection #18 under the Existing Plus Project scenario to a level below significance, respectively. However, Intersections #4 and #18 are both under the jurisdiction of Caltrans and the timing of the improvement to both intersections that is required to achieve an acceptable LOS is outside of the jurisdictional authority of the County of San Bernardino; as such, the Project's impacts to the Intersections #4 and #18 would be significant and unavoidable in the event that Caltrans does not allow traffic signals or does not assure their installation prior to the commencement of the Project's operation.

Opening Year (2018) Scenario

Implementation of the Applicable County Regulatory Requirements would ensure the Project Applicant pays appropriate development impact fees in accordance with Chapter 89.03 (Transportation Facilities Financing) of the San Bernardino County Development Code. The Project would result in cumulative impacts and would be required to implement Mitigation Measures MM 3.I-1 and MM 3.I-2. Implementation of the improvements that are identified in Mitigation Measure MM 3.I-2—which would be made possible, in part, by payment of fair-share fees by the Project Applicant—would fully reduce to a level below significance the Project's cumulatively-considerable impacts to the impacted facilities under the Opening Year (2018) scenario, as indicated in Table 3.I-4, *Opening Year (2018) Intersection Levels of Service*.

However, each of the impacted facilities are under the Jurisdiction of Caltrans. As such, San Bernardino County cannot assure the construction of improvements to State Highway facilities that may be needed to improve traffic flows at the impacted intersections. Furthermore, Caltrans does not have a funding mechanism in place to allow development projects to contribute a fair-share payment to contribute to future improvements and off-set cumulatively considerable traffic impacts. Although Mitigation Measure MM 3.I-2 requires the Project Applicant to make fair share fee contributions to Caltrans to fund improvements to State Highway facilities in the Project study area (in the event that Caltrans establishes a fair share funding program that is applicable to the Project), there is no assurance that planned improvements would be in place prior to the time that the Project begins to contribute traffic to the affected facilities. Accordingly, under the Opening Year (2018) scenario, the Project's cumulatively considerable impacts to the State Highway facilities discussed above would be significant and unavoidable.

Cumulative (2018) Scenario

Implementation of the Applicable County Regulatory Requirements would ensure the Project Applicant pays appropriate development impact fees in accordance with Chapter 89.03 (Transportation Facilities Financing) of the San Bernardino County Development Code. The Project would result in cumulative impacts and would be required to implement Mitigation Measures MM 3.I-1 and MM 3.I-2. Implementation of the improvements that are identified in Mitigation Measure MM 3.I-2—which would be made possible, in part, by payment of fair-share fees by the Project Applicant—would fully reduce to a level below significance the Project's



cumulatively-considerable impacts to the impacted facilities under the Cumulative (2018) scenario, as indicated in Table 3.I-9, *Cumulative (2018) With Project with Improvements Intersection Levels of Service*.

However, each of the impacted facilities are under the Jurisdiction of Caltrans. As such, San Bernardino County cannot assure the construction of improvements to State Highway facilities that may be needed to improve traffic flows at the impacted intersections. Furthermore, Caltrans does not have a funding mechanism in place to allow development projects to contribute a fair-share payment to contribute to future improvements and off-set cumulatively considerable traffic impacts. Although Mitigation Measure MM 3.I-2 requires the Project Applicant to make fair share fee contributions to Caltrans to fund improvements to State Highway facilities in the Project study area (in the event that Caltrans establishes a fair share funding program that is applicable to the Project), there is no assurance that planned improvements would be in place prior to the time that the Project begins to contribute traffic to the affected facilities. Accordingly, under the Cumulative (2018) scenario, the Project's cumulatively considerable impacts to the State Highway facilities discussed above would be significant and unavoidable.

Year 2040 Scenario

Implementation of the Applicable County Regulatory Requirements would ensure the Project Applicant pays appropriate development impact fees in accordance with Chapter 89.03 (Transportation Facilities Financing) of the San Bernardino County Development Code. The Project would result in cumulative impacts and would be required to implement Mitigation Measures MM 3.I-1 and MM 3.I-2. Implementation of the improvements that are identified in Mitigation Measure MM 3.I-2—which would be made possible, in part, by payment of fair-share fees by the Project Applicant—would fully reduce to a level below significance the Project's cumulatively-considerable impacts to the impacted facilities under the Year 2040 Scenario, as indicated in Table 3.I-10, *Year 2040 With Project with Improvements Intersection Levels of Service*.

However, each of the impacted facilities are under the Jurisdiction of Caltrans. As such, San Bernardino County cannot assure the construction of improvements to State Highway facilities that may be needed to improve traffic flows at the impacted intersections. Furthermore, Caltrans does not have a funding mechanism in place to allow development projects to contribute a fair-share payment to contribute to future improvements and off-set cumulatively considerable traffic impacts. Although Mitigation Measure MM 3.I-2 requires the Project Applicant to make fair share fee contributions to Caltrans to fund improvements to State Highway facilities in the Project study area (in the event that Caltrans establishes a fair share funding program that is applicable to the Project), there is no assurance that planned improvements would be in place prior to the time that the Project begins to contribute traffic to the affected facilities. Accordingly, under the Year 2040 Scenario, the Project's cumulatively considerable impacts to the State Highway facilities discussed above would be significant and unavoidable.



Table 3.I-1 Levels of Service Criteria

LOS	Description of Drivers' Perception and Traffic Operation	Delay in Seconds	
		Un-signalized	Signalized
A	This level is typically assigned when the volume-to-capacity ratio is low and either progression is exceptionally favorable or the cycle length is very short. If it is due to favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.	≤ 10	≤ 10
B	This level is assigned when the volume-to-capacity ratio is low and either progression is highly favorable or the cycle length is short. More vehicles stop than with LOS A.	> 10 and ≤ 15	> 10 and ≤ 20
C	This level is typically assigned when progression is favorable or the cycle length is moderate. Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear at this level. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.	> 15 and ≤ 25	> 20 and ≤ 35
D	This level is typically assigned when the volume-to-capacity ratio is high and either progression is ineffective or the cycle length is long. Many vehicles stop and individual cycle failures are noticeable.	> 25 and ≤ 35	> 35 and ≤ 55
E	This level is typically assigned when the volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent.	> 35 and ≤ 50	> 55 and ≤ 80
F	This level is typically assigned when the volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.	> 50	> 80

Source: (Translutions, Inc., 2018, Table B)



Table 3.I-2 Existing Intersection Levels of Service

Intersection	LOS Standard	Control	Without Project				With Project				Project Impact
			Saturday Peak Hour		Sunday Peak Hour		Saturday Peak Hour		Sunday Peak Hour		
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	
1 . Crest Forest Drive/State Route 18	D	TWSC	18.2	C	18.5	C	19.7	C	19.8	C	NO
2 . Lake Gregory Drive/State Route 189	D	TWSC	16.5	C	13.3	B	18.3	C	14.2	B	NO
3 . Lake Gregory Drive/State Route 18	D	Signal	23.4	C	23.7	C	23.6	C	23.4	C	NO
4 . Bear Springs Road/State Route 18	D	TWSC	40.2	E *	30.5	D	61.4	F *	46.1	E *	NO
5 . Project Driveway/State Route 18	D	Signal	Future Intersection				15.9	B	16.9	B	NO
6 . Lake Forest Drive/Grass Valley Road	C	TWSC	9.9	A	10.8	B	9.9	A	10.6	B	NO
7 . State Route 189/Grass Valley Road	D	TWSC	17.1	C	15.7	C	19.5	C	17.7	C	NO
8 . Daley Canyon Road/State Route 189	D	AWSC	17.9	C	13.3	B	28.7	D	17.3	C	NO
9 . Daley Canyon Road/Daley Canyon Access Road	C	TWSC	11.3	B	10.8	B	12.4	B	12.1	B	NO
10 . Daley Canyon Road/State Route 18	D	TWSC	13.4	B	16.2	C	16.9	C	24.9	C	NO
11 . Daley Canyon Access Road/State Route 18	D	TWSC	21.8	C	17.6	C	26.6	D	20.9	C	NO
12 . Bay Road/State Route 189	D	AWSC	13.3	B	10.3	B	14.8	B	11.2	B	NO
13 . Bay Road/Little Bear Road	C	TWSC	9.7	A	9.9	A	9.8	A	10.0	A	NO
14 . Rocky Point Road/State Route 189	D	TWSC	11.6	B	10.1	B	11.2	B	9.8	A	NO
15 . Greenway Drive/State Route 189	D	TWSC	15.8	C	9.5	A	16.9	C	11.6	B	NO
16 . State Route 173/Crest Estates Drive	D	TWSC	9.8	A	11.2	B	11.3	B	11.7	B	NO
17 . State Route 173/State Route 18	D	TWSC	22.5	C	13.7	B	27.0	D	15.0	B	NO
18 . Pine Avenue/State Route 18	D	TWSC	32.7	D	27.2	D	37.7	E *	32.0	D	YES

Source: (Translutions, Inc., 2018, Table D)



Table 3.I-3 Project Trip Generation

Land Use	Units	Saturday				Sunday			
		In	Out	Total	Daily	In	Out	Total	Daily
Soccer Complex	1 Field ¹								
Trip Generation Rates ²		14.563	15.777	30.34	117.430	11.521	16.579	28.100	1.850
PCE Inbound/Outbound Splits		48%	52%	100%	50%/50%	41%	59%	100%	50%/50%
Trip Generation		15	16	30	117	12	17	28	2
Church	600 Seats ²								
Trip Generation Rates ²		0.258	0.342	0.600	0.900	0.305	0.305	0.610	1.850
PCE Inbound/Outbound Splits		43%	57%	100%	50%/50%	50%	50%	100%	50%/50%
Trip Generation		155	205	360	540	183	183	366	1,110
Total Trip Generation		170	221	390	657	195	200	394	1,112

¹ Rates based on peak hour of the generator for Land Use 488 "Soccer Complex" from Institute of Transportation Engineers (ITE) *Trip Generation*, (9th Edition).

² Rates based on peak hour of the generator for Land Use 560 "Church" from ITE *Trip Generation*, (9th Edition).

Source: (Translutions, Inc., 2018, Table A)



Table 3.I-4 Opening Year (2018) Intersection Levels of Service

Intersection	LOS Standard	Control	Without Project				With Project				Project Impact
			Saturday Peak Hour		Sunday Peak Hour		Saturday Peak Hour		Sunday Peak Hour		
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	
1 . Crest Forest Drive/State Route 18	D	TWSC	18.5	C	18.8	C	20.1	C	20.1	C	NO
2 . Lake Gregory Drive/State Route 189	D	TWSC	16.8	C	13.3	B	18.7	C	14.3	B	NO
3 . Lake Gregory Drive/State Route 18	D	Signal	23.4	C	23.5	C	23.6	C	23.2	C	NO
4 . Bear Springs Road/State Route 18	D	TWSC	40.9	E *	30.9	D	63.2	F *	47.0	E *	NO
5 . Project Driveway/State Route 18	D	Signal	Future Intersection				16.0	B	17.0	B	NO
6 . Lake Forest Drive/Grass Valley Road	C	TWSC	9.9	A	10.8	B	9.9	A	10.6	B	NO
7 . State Route 189/Grass Valley Road	D	TWSC	17.1	C	15.7	C	19.6	C	17.9	C	NO
8 . Daley Canyon Road/State Route 189	D	AWSC	18.1	C	13.4	B	29.2	D	17.6	C	NO
9 . Daley Canyon Road/Daley Canyon Access Road	C	TWSC	11.4	B	10.8	B	12.5	B	12.1	B	NO
10 . Daley Canyon Road/State Route 18	D	TWSC	13.5	B	16.5	C	17.0	C	25.7	D	NO
11 . Daley Canyon Access Road/State Route 18	D	TWSC	22.3	C	18.0	C	27.2	D	21.4	C	NO
12 . Bay Road/State Route 189	D	AWSC	13.3	B	10.4	B	14.8	B	11.2	B	NO
13 . Bay Road/Little Bear Road	C	TWSC	9.7	A	9.9	A	9.8	A	10.1	B	NO
14 . Rocky Point Road/State Route 189	D	TWSC	11.6	B	10.1	B	11.2	B	9.8	A	NO
15 . Greenway Drive/State Route 189	D	TWSC	15.8	C	9.5	A	16.9	C	11.6	B	NO
16 . State Route 173/Crest Estates Drive	D	TWSC	9.8	A	11.2	B	11.3	B	11.7	B	NO
17 . State Route 173/State Route 18	D	TWSC	23.4	C	13.9	B	28.7	D	15.3	C	NO
18 . Pine Avenue/State Route 18	D	TWSC	32.9	D	27.6	D	38.7	E *	32.6	D	YES

Notes:

* Exceeds LOS Standard

TWSC = Two-Way Stop Control; For TWSC intersections, reported delay is for worst-case approach/movement.

LOS = Level of Service

Source: (Translutions, Inc., 2018, Table E)



Table 3.I-5 Cumulative (2018) Intersection Levels of Service

Intersection	LOS Standard	Control	Without Project				With Project				Project Impact
			Saturday Peak Hour		Sunday Peak Hour		Saturday Peak Hour		Sunday Peak Hour		
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	
1 . Crest Forest Drive/State Route 18	D	TWSC	22.5	C	22.2	C	24.8	C	24.9	C	NO
2 . Lake Gregory Drive/State Route 189	D	TWSC	17.9	C	13.4	B	20.0	C	14.4	B	NO
3 . Lake Gregory Drive/State Route 18	D	Signal	23.9	C	23.5	C	24.0	C	23.2	C	NO
4 . Bear Springs Road/State Route 18	D	TWSC	48.7	E *	36.7	E *	80.2	F *	60.3	F *	NO
5 . Project Driveway/State Route 18	D	Signal	Future Intersection				16.7	B	17.0	B	NO
6 . Lake Forest Drive/Grass Valley Road	C	TWSC	9.9	A	11.0	B	10.0	A	10.7	B	NO
7 . State Route 189/Grass Valley Road	D	TWSC	18.1	C	16.7	C	20.9	C	19.1	C	NO
8 . Daley Canyon Road/State Route 189	D	AWSC	19.8	C	14.1	B	36.0	E *	19.0	C	YES
9 . Daley Canyon Road/Daley Canyon Access Road	C	TWSC	11.6	B	11.1	B	12.7	B	12.4	B	NO
10 . Daley Canyon Road/State Route 18	D	TWSC	17.2	C	19.6	C	27.4	D	38.9	E *	YES
11 . Daley Canyon Access Road/State Route 18	D	TWSC	26.0	D	20.7	C	32.7	D	25.2	D	NO
12 . Bay Road/State Route 189	D	AWSC	13.6	B	10.4	B	15.1	C	11.4	B	NO
13 . Bay Road/Little Bear Road	C	TWSC	9.7	A	9.9	A	9.8	A	10.1	B	NO
14 . Rocky Point Road/State Route 189	D	TWSC	11.7	B	10.2	B	11.3	B	9.8	A	NO
15 . Greenway Drive/State Route 189	D	TWSC	16.1	C	9.5	A	17.3	C	11.7	B	NO
16 . State Route 173/Crest Estates Drive	D	TWSC	9.9	A	11.6	B	11.6	B	12.1	B	NO
17 . State Route 173/State Route 18	D	TWSC	40.5	E *	17.0	C	58.7	F *	19.8	C	NO
18 . Pine Avenue/State Route 18	D	TWSC	34.5	D	28.5	D	40.0	E *	34.0	D	YES

Notes:

* Exceeds LOS Standard

TWSC = Two-Way Stop Control; For TWSC intersections, reported delay is for worst-case approach/movement.

LOS = Level of Service

Source: (Translutions, Inc., 2018, Table F)



Table 3.I-6 Year 2040 Intersection Levels of Service

Intersection	LOS Standard	Control	Without Project				With Project				Project Impact
			Saturday Peak Hour		Sunday Peak Hour		Saturday Peak Hour		Sunday Peak Hour		
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	
1 . Crest Forest Drive/State Route 18	D	TWSC	24.0	C	27.2	D	26.6	D	31.3	D	NO
2 . Lake Gregory Drive/State Route 189	D	TWSC	20.0	C	15.3	C	22.3	C	16.7	C	NO
3 . Lake Gregory Drive/State Route 18	D	Signal	23.5	C	27.2	C	23.7	C	27.5	C	NO
4 . Bear Springs Road/State Route 18	D	TWSC	74.3	F *	36.5	E *	>100	F *	54.7	F *	NO
5 . Project Driveway/State Route 18	D	Signal	Future Intersection				16.8	B	18.3	B	NO
6 . Lake Forest Drive/Grass Valley Road	C	TWSC	10.2	B	11.0	B	10.2	B	10.8	B	NO
7 . State Route 189/Grass Valley Road	D	TWSC	22.4	C	18.0	C	27.4	D	21.1	C	NO
8 . Daley Canyon Road/State Route 189	D	AWSC	26.6	D	14.0	B	49.8	E *	18.0	C	YES
9 . Daley Canyon Road/Daley Canyon Access Road	C	TWSC	12.6	B	11.4	B	14.0	B	12.7	B	NO
10 . Daley Canyon Road/State Route 18	D	TWSC	24.2	C	20.8	C	56.5	F *	37.9	E *	YES
11 . Daley Canyon Access Road/State Route 18	D	TWSC	31.9	D	25.7	D	41.8	E *	32.9	D	YES
12 . Bay Road/State Route 189	D	AWSC	13.5	B	10.6	B	15.0	B	11.5	B	NO
13 . Bay Road/Little Bear Road	C	TWSC	9.8	A	10.0	A	10.0	A	10.1	B	NO
14 . Rocky Point Road/State Route 189	D	TWSC	11.4	B	10.3	B	11.0	B	9.9	A	NO
15 . Greenway Drive/State Route 189	D	TWSC	15.3	C	9.5	A	16.2	C	11.9	B	NO
16 . State Route 173/Crest Estates Drive	D	TWSC	9.9	A	11.5	B	11.6	B	11.9	B	NO
17 . State Route 173/State Route 18	D	TWSC	>100	F *	22.2	C	>100	F *	27.8	D	NO
18 . Pine Avenue/State Route 18	D	TWSC	75.5	F *	29.7	D	>100	F *	34.3	D	NO

Notes:

* Exceeds LOS Standard

TWSC = Two-Way Stop Control; For TWSC intersections, reported delay is for worst-case approach/movement.

LOS = Level of Service

Source: (Translutions, Inc., 2018, Table G)



Table 3.I-7 Existing Plus Project with Improvements Intersection Levels of Service

Intersection	LOS Standard	Control	With Project				Control	With Project With Improvements				Project Impact
			Saturday Peak Hour		Sunday Peak Hour			Saturday Peak Hour		Sunday Peak Hour		
			Delay	LOS	Delay	LOS		Delay	LOS	Delay	LOS	
4 . Bear Springs Road/State Route 18	D	TWSC	61.4	F *	46.1	E *	Signal	33.0	C	30.3	C	NO
18 . Pine Avenue/State Route 18	D	TWSC	37.7	E *	32.0	D	Signal	7.4	A	5.3	A	NO

Notes:

* Exceeds LOS Standard

TWSC = Two-Way Stop Control; For TWSC intersections, reported delay is for worst-case approach/movement.

LOS = Level of Service

Source: (Translutions, Inc., 2018, Table H)



Table 3.I-8 Opening Year (2018) With Project with Improvements Intersection Levels of Service

Intersection	LOS Standard	Control	With Project				Control	With Project With Improvements				Project Impact
			Saturday Peak Hour		Sunday Peak Hour			Saturday Peak Hour		Sunday Peak Hour		
			Delay	LOS	Delay	LOS		Delay	LOS	Delay	LOS	
4 . Bear Springs Road/State Route 18	D	TWSC	63.2	F *	47.0	E *	Signal	21.4	C	21.4	C	NO
18 . Pine Avenue/State Route 18	D	TWSC	38.7	E *	32.6	D	Signal	14.0	B	18.8	B	NO

Notes:

* Exceeds LOS Standard

TWSC = Two-Way Stop Control; For TWSC intersections, reported delay is for worst-case approach/movement.

LOS = Level of Service

Source: (Translutions, Inc., 2018, Table I)



Table 3.I-9 Cumulative (2018) With Project with Improvements Intersection Levels of Service

Intersection	LOS Standard	Control	With Project				Control	With Project With Improvements				Project Impact
			Saturday Peak Hour		Sunday Peak Hour			Saturday Peak Hour		Sunday Peak Hour		
			Delay	LOS	Delay	LOS		Delay	LOS	Delay	LOS	
4 . Bear Springs Road/State Route 18	D	TWSC	80.2	F *	60.3	F *	Signal	20.7	C	21.2	C	NO
8 . Daley Canyon Road/State Route 189	D	AWSC	36.0	E *	19.0	C	Signal	51.6	D	45.3	D	NO
10 . Daley Canyon Road/State Route 18	D	TWSC	27.4	D	38.9	E *	Signal	30.9	C	32.4	C	NO
17 . State Route 173/State Route 18	D	TWSC	58.7	F *	19.8	C	Signal	28.3	C	26.5	C	NO
18 . Pine Avenue/State Route 18	D	TWSC	40.0	E *	34.0	D	Signal	13.8	B	18.6	B	NO

Notes:

* Exceeds LOS Standard

TWSC = Two-Way Stop Control; For TWSC intersections, reported delay is for worst-case approach/movement.

LOS = Level of Service

Source: (Translutions, Inc., 2018, Table J)



Table 3.I-10 Year 2040 With Project with Improvements Intersection Levels of Service

Intersection	LOS Standard	Control	With Project						Control	With Project With Improvements						Project Impact
			Saturday Peak Hour			Sunday Peak Hour				Saturday Peak Hour			Sunday Peak Hour			
			Delay	LOS		Delay	LOS			Delay	LOS		Delay	LOS		
4 . Bear Springs Road/State Route 18	D	TWSC	>100	F	*	54.7	F	*	Signal	20.9	C	19.6	B		NO	
8 . Daley Canyon Road/State Route 189	D	AWSC	49.8	E	*	18.0	C		Signal	53.2	D	39.2	D		NO	
10 . Daley Canyon Road/State Route 18	D	TWSC	56.5	F	*	37.9	E	*	Signal	32.6	C	32.4	C		NO	
11 . Daley Canyon Access Road/State Route 18	D	TWSC	41.8	E	*	32.9	D		Signal	25.9	C	26.5	C		NO	
17 . State Route 173/State Route 18	D	TWSC	>100	F	*	27.8	D		Signal	29.4	C	27.5	C		NO	
18 . Pine Avenue/State Route 18	D	TWSC	>100	F	*	34.3	D		Signal	11.5	B	14.5	B		NO	

Notes:

* Exceeds LOS Standard

TWSC = Two-Way Stop Control; For TWSC intersections, reported delay is for worst-case approach/movement.

LOS = Level of Service

Source: (Translutions, Inc., 2018, Table K)



3.J GREENHOUSE GAS EMISSIONS

The analysis in this Subsection is based on a report prepared by HDR, Inc. titled “Air Quality and Greenhouse Gas Analysis,” dated April 2018, and is included in *Technical Appendix B* to this DREIR. The analysis provided in this Subsection assesses the Project’s potential to generate greenhouse gas (GHG) emissions that could contribute to Global Climate Change (GCC) and its associated environmental effects.

3.J.1 ENVIRONMENTAL SETTING

3.J.1.1 INTRODUCTION TO GLOBAL CLIMATE CHANGE

GCC is defined as the change in average meteorological conditions on Earth with respect to temperature, precipitation, and storms. GCC is one of the most controversial environmental issues in the United States and much more debate exists within the scientific community about the degree to which GCC is occurring naturally or as a result of human activity. Some data suggests that GCC has occurred over the course of thousands or millions of years, and that these historical changes to Earth’s climate have occurred naturally without human influence, as in the case of an ice age. However, many scientists believe that the climate shift taking place since the industrial revolution (1900) is occurring at a quicker rate and magnitude than in the past. Scientific evidence suggests that GCC is the result of increased concentrations of GHGs in planet Earth’s atmosphere, including carbon dioxide, methane, nitrous oxide, and fluorinated gases.

An individual land development project is not capable of generating the magnitude of greenhouse gas (GHG) emissions necessary to cause a discernible effect on global climate. However, individual projects may contribute to GCC by generating GHGs that combine with other regional and global sources of GHGs.

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the earth's climate system. An ever-increasing body of scientific research attributes these climatological changes to GHG emissions, particularly those generated from the production and use of fossil fuels. (HDR, 2018, p. 16)

While climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change (IPCC) by the United Nations and World Meteorological Organization in 1988 has led to increased efforts devoted to GHG emissions reduction and climate change research and policy. These efforts are primarily concerned with the emissions of GHGs generated by human activity including carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF₆), HFC-23 (fluoroform), HFC-134a (1,1,1,2-tetrafluoroethane), and HFC-152a (difluoroethane). (HDR, 2018, p. 16)

In the U.S., the main source of GHG emissions is electricity generation, followed by transportation. In California, however, transportation sources (including passenger cars, light-duty trucks, other trucks, buses, and motorcycles) make up the largest source of GHG-emitting sources. The dominant GHG emitted is CO₂, mostly from fossil fuel combustion. (HDR, 2018, p. 16)



3.J.1.2 GREENHOUSE GASES

Carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O) emissions are the focus of evaluation in this Subsection because these gases are the primary contributors to GCC resulting from land development projects. Although other substances, such as fluorinated gases, also contribute to GCC, sources of fluorinated gases are not well-defined and no accepted emissions factors or methodology exist to accurately calculate the emissions of these gases.

Greenhouse gases vary considerably in terms of Global Warming Potential (GWP), which is a concept developed to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The GWP is based on several factors, including the relative effectiveness of a gas to absorb infrared radiation and length of time that the gas remains in the atmosphere (“atmospheric lifetime”). The GWP of each gas is measured relative to CO₂, the most abundant GHG. The definition of GWP for a particular GHG is the ratio of heat trapped by one-unit mass of the GHG to the ratio of heat trapped by one unit mass of CO₂ over a specified time period. GHG emissions are typically measured in terms of pounds or tons of “CO₂ equivalents” (CO₂e). (HDR, 2018, p. 16) Table 3.J-1, *Global Warming Potential for GHGs*, shows the GWPs for each type of GHG.

Table 3.J-1 Global Warming Potential for GHGs

Gas	Atmospheric Lifetime (Years)	Global Warming Potential (100-year Time Horizon)
Carbon Dioxide (CO ₂)	50–200	1
Methane (CH ₄)	12	21
Nitrous Oxide (N ₂ O)	114	310
HFC-23	270	11,700
HFC-134a	14	1,300
HFC-152a	1.4	140
PFC: Tetrafluoromethane (CF ₄)	50,000	6,500
PFC: Hexafluoromethane (C ₂ F ₆)	10,000	9,200
Sulfur Hexafluoride (SF ₆)	3,200	23,900

Provided below is a description of the various gases that contribute to GCC.

- Water Vapor (H₂O) is the most abundant and variable GHG in the atmosphere. Changes in the concentration of water vapor in the atmosphere are considered to be a result of climate feedbacks related to the warming of the atmosphere rather than a direct result of industrialization. As the temperature of the atmosphere rises, more water is evaporated from ground storage (rivers, oceans, reservoirs, soil). Because the air is warmer, the relative humidity rises (in essence, the air is able to



‘hold’ more water when it is warmer), leading to more water vapor in the atmosphere. The higher concentration of water vapor in the atmosphere is then able to absorb more indirect thermal energy radiated from the Earth, further warming the atmosphere, and causing the evaporation cycle to perpetuate. This is referred to as a “positive feedback loop.” The extent to which this positive feedback loop will continue is unknown as there are also dynamics that hold the positive feedback loop in check. As an example, when water vapor increases in the atmosphere, more of it will eventually also condense into clouds, which are able to reflect incoming solar radiation and thereby allow less energy to reach the Earth’s surface and heat it up. There are no human health effects from water vapor itself; however, certain pollutants can dissolve in water vapor and the water vapor can then act as a pollutant-carrying agent.

- Carbon Dioxide (CO₂) is an odorless and colorless GHG that is emitted from natural and man-made sources. Natural CO₂ sources include: the decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Man-made CO₂ sources include: the burning of coal, oil, natural gas, and wood. Since the industrial revolution began in the mid-1700s, human activities that produce CO₂ have increased dramatically. As an example, prior to the industrial revolution, CO₂ concentrations in the atmosphere were fairly stable at 280 parts per million (ppm). Today, they are around 370 ppm, an increase of more than 30%. Exposure to CO₂ in high concentrations can cause adverse human health effects, but outdoor (atmospheric) levels are not high enough to be detrimental to human health.
- Methane (CH₄) absorbs thermal radiation extremely effectively (i.e., retains heat). Over the last 50 years, human activities such as rice cultivation, cattle ranching, natural gas combustion, and coal mining have increased the concentration of methane in the atmosphere. Other man-made sources include fossil-fuel combustion and biomass burning. No human health effects are known to occur from atmospheric exposure to methane; however, methane is an asphyxiant that may displace oxygen in enclosed spaces.
- Nitrous Oxide: Nitrous oxide (N₂O), also known as laughing gas, is a colorless greenhouse gas. Nitrous oxide can cause dizziness, euphoria, and sometimes slight hallucinations. In small doses, it is considered harmless. However, in some cases, heavy and extended use can cause Olney’s Lesions (brain damage).
- Chlorofluorocarbons (CFCs) are gases formed synthetically by replacing all hydrogen atoms in CH₄ or ethane (C₂H₆) with chlorine and/or fluorine atoms. CFCs are non-toxic, non-flammable, insoluble and chemically unreactive in the troposphere (the level of air at the Earth’s surface). CFCs were first synthesized in 1928 and have no natural source. CFCs were used for refrigerants, aerosol propellants and cleaning solvents. Due to the discovery that they are able to destroy stratospheric ozone, a global effort to halt their production was undertaken and has been extremely successful, so much so that levels of CFCs are now remaining steady or declining. However, due to their long atmospheric lifetime, some of the CFCs will remain in the atmosphere for over 100 years.
- Hydrofluorocarbons (HFCs) are synthetic, man-made chemicals that are used as a substitute for CFCs and have one of the highest global warming potential ratings. The HFCs with the largest measured



atmospheric abundances are (in order largest to smallest), HFC-23 (CHF_3), HFC-134a ($\text{CF}_3\text{CH}_2\text{F}$), and HFC-152a (CH_3CHF_2). No human health effects are known to result from exposure to HFCs, which are man-made and used for applications such as automobile air conditioners and refrigerants.

- Perfluorocarbons (PFCs) are primarily produced for aluminum production and semiconductor manufacture. PFCs have stable molecular structures and do not break down through chemical processes in the lower atmosphere. Because of this, PFCs have very long lifetimes, between 10,000 and 50,000 years. Two common PFCs are tetrafluoromethane (CF_4) and hexafluoroethane (C_2F_6). No human health effects are known to result from exposure to PFCs.
- Sulfur Hexafluoride (SF_6) is an inorganic, odorless, colorless, nontoxic, nonflammable gas. Sulfur hexafluoride is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection. In high concentrations in confined areas, the gas presents the hazard of suffocation because it displaces the oxygen needed for breathing.

3.J.1.3 GREENHOUSE GAS EMISSION INVENTORIES

A. Global and National

Worldwide man-made GHG emissions are tracked by the Intergovernmental Panel on Climate Change and man-made GHG emissions data is available through 2015. In 2015, total GHG emissions were approximately 28,872,564 gigagrams (Gg) of carbon dioxide equivalent (CO_2e). The United States is reported as the second-largest emitter of GHGs in the world in 2015. The primary man-made GHG emitted in the United States was CO_2 , representing approximately 83% of the United States' total GHG emissions. CO_2 emissions from fossil fuel combustion is the largest source of GHG emission in the United States, accounting for 78% of the United States' total GHG emissions. (UNFCCC, 2015)

B. State of California

The California Air Resources Board (CARB) compiles GHG inventories for the State of California. Based on 2017 GHG inventory data, California emitted approximately 440.4 million metric tons (MMT) of CO_2e . California is the second-largest emitter of GHGs in the United States. (CARB, 2016)

C. Project Site

Under existing conditions, the Project site is undeveloped and does not produce a substantial amount of GHG emissions.

D. Potential Effects of Climate Change in California

In February 2006, the California Climate Change Center (CCCC) published a report titled "Scenarios of Climate Change in California: An Overview" (the "Climate Scenarios report") that is generally instructive about effects of climate change in California. The Climate Scenarios report used a range of emissions scenarios developed by the Intergovernmental Panel on Climate Change (IPCC) to project a series of potential warming ranges (i.e., temperature increases) that may occur in California during the 21st century: lower warming range ($3.0\text{-}5.4^\circ\text{F}$); medium warming range ($5.5\text{-}7.8^\circ\text{F}$); and higher warming range ($8.0\text{-}10.4^\circ\text{F}$). (CCCC, 2006, p. 7)



Based on the estimated scenarios presented in the Climate Scenario and California Climate Adaption The potential effects of climate change in California are summarized in more detail below and include, but are not limited to, the following:

- Human Health Effects: Higher temperatures can affect the health of Californians by increasing the frequency, duration, and intensity of conditions conducive to the formation of air pollutants, excessive heat, and wildfires. Rising temperatures could increase the risk of death from dehydration, heat stroke/exhaustion, heart attack, stroke, and respiratory distress. In addition, if global background ozone levels increase, it may be impossible to meet local air quality standards. (CCCC, 2006, p. 7)
- Water Resources/Supply Effects: Rising temperatures, potentially compounded by decreases in precipitation, could severely reduce spring snowpack, which would increase the risk of summer water shortages. In addition, California's fresh water supplies are also at risk to saltwater intrusion due to rising sea levels. Saltwater intrusion is a major threat to the quality and reliability of fresh water within the southern edge of the Sacramento/San Joaquin River Delta. (CCCC, 2006, p. 7)
- Agricultural Effects: Increased temperatures could cause widespread changes to the agricultural industry by reducing the quantity and quality of agricultural products. Rising temperatures could aggregate ozone (O₃) pollution, which makes plants more susceptible to diseases and pests and interferes with plant growth. Although higher temperatures lead to faster plant growth rates, faster growth can result in less-than-optimal development for crops which could worsen the quantity and quality of crop yield. Climate change affects agriculture directly through increasing temperatures and rising CO₂ concentrations and indirectly through changes in water availability and pests. (CCCC, 2006, p. 7)
- Forests and Landscape Effects: Climate change has the potential to alter natural ecosystems and biological diversity within the State. As temperatures rise, the risk of wildfires and altering the distribution and character of natural vegetation intensifies. Productivity of the State's forests has the potential to decrease as a result of climate change. (CCCC, 2006, p. 7)
- Rising Sea Level Effects: Climate change has the potential to raise sea levels, cause more intense coastal storms, and increase seawater temperatures. Under the CCCC's higher warming range scenario, sea level is anticipated to rise between 22 and 35 inches by 2100 and under the CCCC's lower warming range scenario, sea level is anticipated to rise between 12 and 14 inches by 2100. (CCCC, 2006, p. 7)

3.J.1.4 REGULATORY FRAMEWORK

The following is a brief description of the applicable federal, State, and local environmental laws and related regulations related to GHG emissions.



A. International

1. *Kyoto Protocol*

The Kyoto Protocol is an international agreement linked to the United Nations Framework Convention on Climate Change, which commits its Parties by setting internationally binding emission reduction targets. Recognizing that developed countries are principally responsible for the current high levels of GHG emissions in the atmosphere as a result of more than 150 years of industrial activity, the Protocol places a heavier burden on developed nations under the principle of "common but differentiated responsibilities." (UNFCCC, 1998)

The Kyoto Protocol was adopted in Kyoto, Japan, on December 11, 1997 and entered into force on February 16, 2005. The detailed rules for the implementation of the Protocol were adopted at Conference of the Parties (COP) 7 in Marrakesh, Morocco, in 2001, and are referred to as the "Marrakesh Accords." Its first commitment period started in 2008 and ended in 2012. (UNFCCC, 1998)

On December 8, 2012, in Doha, Qatar, the "Doha Amendment to the Kyoto Protocol" was adopted. The amendment includes:

- New commitments for Annex I Parties to the Kyoto Protocol who agreed to take on commitments in a second commitment period from January 1, 2013 to December 31, 2020;
- A revised list of greenhouse gases (GHG) to be reported on by Parties in the second commitment period; and
- Amendments to several articles of the Kyoto Protocol which specifically referenced issues pertaining to the first commitment period and which needed to be updated for the second commitment period. (UNFCCC, 1998)

On December 21, 2012, the amendment was circulated by the Secretary-General of the United Nations, acting in his capacity as Depositary, to all Parties to the Kyoto Protocol in accordance with Articles 20 and 21 of the Protocol. (UNFCCC, 1998)

During the first commitment period, 37 industrialized countries and the European Community committed to reduce GHG emissions to an average of 5% against 1990 levels. During the second commitment period, Parties committed to reduce GHG emissions by at least 18% below 1990 levels in the eight-year period from 2013 to 2020; however, the composition of Parties in the second commitment period is different from the first. (UNFCCC, 1998)

2. *The Paris Agreement*

The Paris Agreement builds upon the United Nations Framework Convention on Climate Change and – for the first time – brought all nations into a common cause to undertake ambitious efforts to combat climate change and adapt to its effects, with enhanced support to assist developing countries to do so. As such, it charts a new course in the global climate effort. (UNFCCC, 2015)

The Paris Agreement's central aim is to strengthen the global response to the threat of climate change by keeping a global temperature rise the 21st century well below 2 degrees Celsius above pre-industrial levels



and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius. Additionally, the agreement aims to strengthen the ability of countries to deal with the impacts of climate change. To reach these ambitious goals, appropriate financial flows, a new technology framework and an enhanced capacity building framework will be put in place, thus supporting action by developing countries and the most vulnerable countries, in line with their own national objectives. The Agreement also provides for enhanced transparency of action and support through a more robust transparency framework. (UNFCCC, 2015)

The Paris Agreement requires all Parties to put forward their best efforts through “nationally determined contributions” (NDCs) and to strengthen these efforts in the years ahead. This includes requirements that all Parties report regularly on their emissions and on their implementation efforts. (UNFCCC, 2015)

In 2018, Parties will take stock of the collective efforts in relation to progress towards the goal set in the Paris Agreement and to inform the preparation of NDCs. There also will be global stock-taking every five years to assess the collective progress towards achieving the purpose of the Agreement and to inform further individual actions by Parties. (UNFCCC, 2015)

The Paris Agreement entered into force on November 4, 2016, 30 days after the date on which at least 55 Parties to the Convention accounting in total for at least an estimated 55% of the total global greenhouse gas emissions have deposited their instruments of ratification, acceptance, approval, or accession with the Depositary. (UNFCCC, 2015)

On June 1, 2017, President Donald Trump announced he would begin the process of withdrawing the United States from the Paris Agreement. In accordance with articles within the Paris Agreement, the earliest effective date for the United States’ withdrawal from the Agreement is November 4, 2020.

B. Federal

1. Clean Air Act

Coinciding with the 2009 meeting of international leaders in Copenhagen, on December 7, 2009, the EPA issued an Endangerment Finding under Section 202(a) of the Clean Air Act (CAA), opening the door to federal regulation of GHGs. The Endangerment Finding notes that GHGs threaten public health and welfare and are subject to regulation under the CAA. To date, the EPA has not promulgated regulations on GHG emissions, but it has begun to develop them.

Previously the EPA had not regulated GHGs under the CAA because it asserted that the Act did not authorize it to issue mandatory regulations to address GCC and that such regulation would be unwise without an unequivocally established causal link between GHGs and the increase in global surface air temperatures. In *Massachusetts v. Environmental Protection Agency et al.* (127 S. Ct. 1438 [2007]); however, the U.S. Supreme Court held that GHGs are pollutants under the CAA and directed the EPA to decide whether the gases endangered public health or welfare. The EPA had also not moved aggressively to regulate GHGs because it expected Congress to make progress on GHG legislation, primarily from the standpoint of a cap-and-trade system. However, proposals circulated in both the House of Representative and Senate have been controversial and it may be some time before the U.S. Congress adopts major climate change legislation. The EPA’s Endangerment Finding paves the way for federal regulation of GHGs with or without Congress.



C. State

1. *Title 24 Building Energy Standards*

The California Energy Commission (CEC) first adopted Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations, Title 24, Part 6) in 1978 in response to a legislative mandate to reduce energy consumption in the state. Although not originally intended to reduce GHG emissions, increased energy efficiency, and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and nonresidential buildings subject to the standard. The standards are updated periodically to allow for the consideration and inclusion of new energy efficiency technologies and methods. The latest revisions (2016 Building Energy Efficiency Standards) became effective on January 1, 2017. The 2016 Building Energy Efficiency Standards are 28% more efficient than the previous (2013) Building Energy Efficiency Standards for residential construction and 5% more efficient than the previous Standards for non-residential construction. (The 2013 Building Energy Efficiency Standards already were 25% more efficient for residential construction and 30% more efficient for nonresidential construction than the 2008 Building Energy Efficiency Standards they replaced.)

Part 11 of Title 24 is referred to as the California Green Building Standards Code (CalGreen Code). The purpose of the CalGreen Code is to “improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories: (1) Planning and design; (2) Energy efficiency; (3) Water efficiency and conservation; (4) Material conservation and resource efficiency; and (5) Environmental air quality.” The CalGreen Code is not intended to substitute or be identified as meeting the certification requirements of any green building program that is not established and adopted by the California Building Standards Commission (CBSC). Unless otherwise noted in the regulation, all newly constructed buildings in California are subject of the requirements of the CalGreen Code.

2. *California Assembly Bill No. 1493 (AB 1493)*

AB 1493 required CARB to adopt the nation’s first GHG emission standards for automobiles. On September 24, 2009, CARB adopted amendments to the “Pavley” regulations that reduce GHG emissions in new passenger vehicles from model year 2009 through 2016. These amendments were part of California’s commitment toward a nation-wide program to reduce new passenger vehicle GHGs from 2012 through 2016. CARB’s September amendments cement California’s enforcement of the Pavley rule starting in 2009 while providing vehicle manufacturers with new compliance flexibility. The amendments also prepare California to harmonize its rules with the federal rules for passenger vehicles. (CARB, 2017a)

The U.S. EPA granted California the authority to implement GHG emission reduction standards for new passenger cars, pickup trucks, and sport utility vehicles On June 30, 2009. The first California request to implement GHG standards for passenger vehicles, known as a waiver request, was made in December 2005, and was denied by the EPA in March 2008. That decision was based on a finding that California’s request to reduce GHG emissions from passenger vehicles did not meet the CAA requirement of showing that the waiver was needed to meet “compelling and extraordinary conditions.” (CARB, 2017a)



CARB's Board originally approved regulations to reduce GHGs from passenger vehicles in September 2004, with the regulations to take effect in 2009. These regulations were authorized by the 2002 legislation Assembly Bill 1493 (Pavley). (CARB, 2017a)

The regulations had been threatened by automaker lawsuits and were stalled by the EPA's delay in reviewing and then initially denying California's waiver request. The parties involved entered a May 19, 2009 agreement to resolve these issues. With the granting of the waiver on June 30, 2009, it is expected that the Pavley regulations reduced GHG emissions from California passenger vehicles by about 22% in 2012 and about 30% in 2016, all while improving fuel efficiency and reducing motorists' costs. (CARB, 2017a)

The CARB has adopted a new approach to passenger vehicles – cars and light trucks – by combining the control of smog-causing pollutants and greenhouse gas emissions into a single coordinated package of standards. The new approach also includes efforts to support and accelerate the numbers of plug-in hybrids and zero-emission vehicles in California. (CARB, 2017a)

3. *Executive Order S-3-05*

Executive Order (EO) S-3-05 documents GHG emission reduction goals, creates the Climate Action Team and directs the Secretary of the California EPA to coordinate efforts with meeting the GHG reduction targets with the heads of other state agencies. The EO requires the Secretary to report back to the Governor and Legislature biannually to report: progress toward meeting the GHG goals; GHG impacts to California; and applicable Mitigation and Adaptation Plans. EO S-3-05 goals for GHG emissions reductions include: reducing GHG emissions to 2000 levels by the year 2010; reducing GHG emissions to 1990 levels by the year 2020; and reducing GHG emissions to 80% below 1990 levels by 2050. (CCC, 2018a)

4. *California Assembly Bill 32- Global Warming Solutions Act of 2006*

In September 2006, Governor Schwarzenegger signed Assembly Bill 32 (AB 32), the California Climate Solutions Act of 2006. AB 32 requires California to reduce its GHG emissions to 1990 levels by 2020, which represents a reduction of approximately 15% below emissions expected under a "business as usual" scenario. Pursuant to AB 32, the CARB must adopt regulations to achieve the maximum technologically feasible and cost-effective GHG emission reductions. The full implementation of AB 32 will help mitigate risks associated with climate change, while improving energy efficiency, expanding the use of renewable energy resources, cleaner transportation, and reducing waste. (CARB, 2014) AB 32 specifically required that CARB do the following:

- Prepare and approve a Scoping Plan for achieving the maximum technologically feasible and cost-effective reductions in GHG emissions from sources or categories of sources of GHGs by 2020, and update the Scoping Plan every five years.
- Maintain and continue reductions in emissions of GHG beyond 2020.
- Identify the statewide level of GHG emissions in 1990 to serve as the emissions limit to be achieved by 2020.
- Identify and adopt regulations for discrete early actions that could be enforceable on or before January 1, 2010.



- Adopt a regulation that establishes a system of market-based declining annual aggregate emission limits for sources or categories of sources that emit GHG emissions.
- Convene an Environmental Justice Advisory Committee to advise the Board in developing and updating the Scoping Plan and any other pertinent matter in implementing AB 32.
- Appoint an Economic and Technology Advancement Advisory Committee to provide recommendations for technologies, research, and GHG emission reduction measures. (CARB, 2014)

In November 2007, CARB completed its estimated calculations of Statewide 1990 GHG levels. Net emission 1990 levels were estimated at 427 million metric tons (MMTs) (emission sources by sector were: transportation – 35%; electricity generation – 26%; industrial – 24%; residential – 7%; agriculture – 5%; and commercial – 3%). Accordingly, 427 million metric tons of carbon dioxide equivalent (MMTCO_{2e}) was established as the emissions limit for 2020. For comparison, CARB’s estimate for baseline GHG emissions was 473 MMTCO_{2e} for 2000 and without emissions reduction measures 2010 emissions were projected to be 532 MMTCO_{2e}. “Business as usual” conditions (without the reductions to be implemented by CARB regulations) for 2020 were projected to be 596 MMTCO_{2e}. (CARB, 2007)

AB 32 required CARB to develop a Scoping Plan which lays out California’s strategy for meeting the goals. The Scoping Plan must be updated every five years. In December 2008, CARB approved the initial Scoping Plan, which included a suite of measures to sharply cut GHG emissions. Table 3.J-2, *CARB Scoping Plan GHG Reduction Measures Towards 2020 Target*, shows the proposed reductions from regulations and programs outlined in the Scoping Plan. While local government operations were not accounted for in achieving the Year 2020 emissions reduction, local land use changes are estimated to result in a reduction of 5 MMTCO_{2e}, which is approximately 3% of the 2020 GHG emissions reduction goal. In recognition of the critical role local governments will play in successful implementation of AB 32, CARB is recommending GHG reduction goals of 15% of 2006 levels by 2020 to ensure that municipal and community-wide emissions match the State’s reduction target. According to the Measure Documentation Supplement to the Scoping Plan, local government actions and targets are anticipated to reduce vehicle miles by approximately 2% through land use planning, resulting in a potential GHG reduction of 2 MMTCO_{2e} (or approximately 1.2% of the GHG reduction target). (CARB, 2014)



Table 3.J-2 CARB Scoping Plan GHG Reduction Measures Towards 2020 Target

<i>Recommended Reduction Measures</i>	<i>Reductions Counted toward 2020 Target of 169 MMT CO₂e</i>	<i>Percentage of Statewide 2020 Target</i>
Cap and Trade Program and Associated Measures		
California Light-Duty Vehicle GHG Standards	31.7	19%
Energy Efficiency	26.3	16%
Renewable Portfolio Standard (33 percent by 2020)	21.3	13%
Low Carbon Fuel Standard	15	9%
Regional Transportation-Related GHG Targets ¹	5	3%
Vehicle Efficiency Measures	4.5	3%
Goods Movement	3.7	2%
Million Solar Roofs	2.1	1%
Medium/Heavy Duty Vehicles	1.4	1%
High Speed Rail	1.0	1%
Industrial Measures	0.3	0%
Additional Reduction Necessary to Achieve Cap	34.4	20%
Total Cap and Trade Program Reductions	146.7	87%
Uncapped Sources/Sectors Measures		
High Global Warming Potential Gas Measures	20.2	12%
Sustainable Forests	5	3%
Industrial Measures (for sources not covered under cap and trade program)	1.1	1%
Recycling and Waste (landfill methane capture)	1	1%
Total Uncapped Sources/Sectors Reductions	27.3	16%
Total Reductions Counted toward 2020 Target	174	100%
Other Recommended Measures – Not Counted toward 2020 Target		
State Government Operations	1.0 to 2.0	1%
Local Government Operations	To Be Determined ²	NA
Green Buildings	26	15%
Recycling and Waste	9	5%
Water Sector Measures	4.8	3%
Methane Capture at Large Dairies	1	1%
Total Other Recommended Measures – Not Counted toward 2020 Target	42.8	NA

Source: CARB. 2008, MMTons CO₂e: million metric tons of CO₂e

¹Reductions represent an estimate of what may be achieved from local land use changes. It is not the SB 375 regional target.

²According to the Measure Documentation Supplement to the Scoping Plan, local government actions and targets are anticipated to reduce vehicle miles by approximately 2 percent through land use planning, resulting in a potential GHG reduction of 2 million metric tons of CO₂e (or approximately 1.2 percent of the GHG reduction target). However, these reductions were not included in the Scoping Plan reductions to achieve the 2020 Target

Overall, CARB determined that achieving the 1990 emission level in 2020 would require a reduction in GHG emissions of approximately 28.5% in the absence of new laws and regulations (referred to as "Business-As-Usual" [BAU]). The Scoping Plan evaluates opportunities for sector-specific reductions, integrates all CARB and Climate Action Team (CAT) early actions and additional GHG reduction measures, identifies additional measures to be pursued as regulations, and outlines the role of the cap-and-trade program.



When the 2020 emissions level projection also was updated to account for implemented regulatory measures, including Pavley (vehicle model-years 2009 - 2016) and the renewable portfolio standard (12% - 20%), the 2020 projection in the BAU condition was reduced further to 507 MTCO₂e. As a result, based on the updated economic and regulatory data, CARB determined that achieving the 1990 emissions level in 2020 would now only require a reduction of GHG emissions of 80 MTCO₂e, or approximately 16% (down from 28.5%), from the BAU condition.

In May 2014, CARB approved the First Update to the Climate Change Scoping Plan (Update), which builds upon the initial Scoping Plan with new strategies and recommendations. The Update highlights California's progress toward meeting the near-term 2020 GHG emission reduction goals, highlights the latest climate change science and provides direction on how to achieve long-term emission reduction goal described in Executive Order S-3-05. The Update recalculates 1990 GHG emissions using new global warming potentials identified in the IPCC Fourth Assessment Report released in 2007. Using those GWPs, the 427 MTCO₂e 1990 emissions level and 2020 GHG emissions limit identified in the 2008 Scoping Plan would be slightly higher, at 431 MTCO₂e. Based on the revised 2020 emissions level projection identified in the 2011 Final Supplement and the updated 1990 emissions levels identified in the discussion draft of the First Update, achieving the 1990 emissions level in 2020 would require a reduction of 78 MTCO₂e (down from 509 MTCO₂e), or approximately 15.3% (down from 28.5%), from the BAU condition. (CARB, 2014)

It should be noted that pursuant to Executive Order B-30-15 and SB 32, in November 2017, CARB approved California's 2017 Climate Change Scoping Plan, which extended the goals of AB 32 and set a 2030 goal of reducing emissions 40% from 2020 levels. Refer to the discussion under Subsection 4.6.2.12 for a detailed discussion about California's 2017 Climate Change Scoping Plan. (CARB, 2017)

5. *California Senate Bill No. 1368 (SB 1368)*

In 2006, the State Legislature adopted Senate Bill (SB) 1368 (Perata, Chapter 598, Statutes of 2006), which directs the California Public Utilities Commission (CPUC) to adopt a GHG emission performance standard (EPS) for the future power purchases of California utilities. SB 1368 seeks to limit carbon emissions associated with electrical energy consumed in California by forbidding procurement arrangements for energy longer than five years from resources that exceed specified emissions criteria. Accordingly, SB 1368 effectively prevents California's utilities from investing in, otherwise financially supporting, or purchasing power from new coal plants located in or out of the State. SB 1368 will lead to dramatically lower GHG emissions associated with California energy demand. (CEC, n.d.)

6. *Executive Order S-01-07*

Executive Order (EO) S-01-07 is effectively known as the Low Carbon Fuel Standard (LCFS). The Executive Order seeks to reduce the carbon intensity of California's passenger vehicle fuels by at least 10% by 2020. The LCFS requires fuel providers in California to ensure that the mix of fuel they sell into the California market meet, on average, a declining standard for GHG emissions measured in CO₂e grams per unit of fuel energy sold. (CCC, 2018a)



7. Senate Bill 1078

Senate Bill (SB) 1078 establishes the California Renewables Portfolio Standard Program, which requires electric utilities and other entities under the jurisdiction of the California Public Utilities Commission to meet 20% of their renewable power by December 31, 2017 for the purposes of increasing the diversity, reliability, public health, and environmental benefits of the energy mix. (CCC, 2018b)

8. Senate Bill 107

SB 107 directed California Public Utilities Commission's Renewable Energy Resources Program to increase the amount of renewable electricity (Renewable Portfolio Standard) generated per year, from 17% to an amount that equals at least 20% of the total electricity sold to retail customers in California per year by December 31, 2010. (CCC, 2018b)

9. Executive Order S-14-08

On November 17, 2008, Governor Schwarzenegger signed Executive Order S-14-08, revising California's existing Renewable Portfolio Standard (RPS) upward to require all retail sellers of electricity to serve 33% of their load from renewable energy sources by 2020. In order to meet this new goal, a substantial increase in the development of wind, solar, geothermal, and other "RPS eligible" energy projects will be needed. Executive Order S-14-08 seeks to accelerate such development by streamlining the siting, permitting, and procurement processes for renewable energy generation facilities.

10. Senate Bill 97

By enacting SB 97 in 2007, California's lawmakers expressly recognized the need to analyze GHGs as a part of the CEQA process. SB 97 required the Governor's Office of Planning and Research (OPR) to develop, and the Natural Resources Agency to adopt, amendments to the CEQA Guidelines addressing the analysis and mitigation of greenhouse gas emissions. (OPR, n.d.) Those CEQA Guidelines amendments clarified several points, including the following:

- Lead agencies must analyze the GHG emissions of proposed projects and must reach a conclusion regarding the significance of those emissions. (See CEQA Guidelines § 15064.4.)
- When a project's GHG emissions may be significant, lead agencies must consider a range of potential mitigation measures to reduce those emissions. (See CEQA Guidelines § 15126.4(c).)
- Lead agencies must analyze potentially significant impacts associated with placing projects in hazardous locations, including locations potentially affected by climate change. (See CEQA Guidelines § 15126.2(a).)
- Lead agencies may significantly streamline the analysis of GHGs on a project level by using a programmatic GHG emissions reduction plan meeting certain criteria. (See CEQA Guidelines § 15183.5(b).)
- CEQA mandates analysis of a proposed project's potential energy use (including transportation-related energy), sources of energy supply, and ways to reduce energy demand, including through the use of efficient transportation alternatives. (See CEQA Guidelines, Appendix F.) (OPR, n.d.)



The CEQA Guideline amendments do not identify a quantitative threshold of significance for GHG emissions, nor do they prescribe assessment methodologies or specific mitigation measures. Instead, they call for a “good-faith effort, based on available information, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project.” The amendments encourage lead agencies to consider many factors in performing a CEQA analysis and preserve lead agencies’ discretion to make their own determinations based upon substantial evidence. The amendments also encourage public agencies to make use of programmatic mitigation plans and programs from which to tier when they perform individual project analyses.

11. *Senate Bill 375*

The Sustainable Communities and Climate Protection Act of 2008 (Sustainable Communities Act, SB 375, Chapter 728, Statutes of 2008) supports the State's climate action goals to reduce greenhouse gas (GHG) emissions through coordinated transportation and land use planning with the goal of more sustainable communities. (CARB, 2017b)

Under the Sustainable Communities Act, CARB sets regional targets for GHG emissions reductions from passenger vehicle use. In 2010, CARB established these targets for 2020 and 2035 for each region covered by one of the State's metropolitan planning organizations (MPO). CARB will periodically review and update the targets, as needed. (CARB, 2017b)

Each of California’s MPOs must prepare a "sustainable communities strategy" (SCS) as an integral part of its regional transportation plan (RTP). The SCS contains land use, housing, and transportation strategies that, if implemented, would allow the region to meet its GHG emission reduction targets. Once adopted by the MPO, the RTP/SCS guides the transportation policies and investments for the region. CARB must review the adopted SCS to confirm and accept the MPO's determination that the SCS, if implemented, would meet the regional GHG targets. If the combination of measures in the SCS would not meet the regional targets, the MPO must prepare a separate “alternative planning strategy” (APS) to meet the targets. The APS is not a part of the RTP. (CARB, 2017b)

The Sustainable Communities Act also establishes incentives to encourage local governments and developers to implement the SCS or the APS. Developers can get relief from certain environmental review requirements under CEQA if their new residential and mixed-use projects are consistent with a region’s SCS (or APS) that meets the targets (see Public Resources Code Sections 21155, 21155.1, 21155.2, 21159.28.). (CARB, 2017b)

12. *Executive Order B-30-15*

On April 29, 2015, Governor Brown issued Executive Order B-30-15, which sets a goal to reduce GHG emissions in California to 40% below 1990 levels by 2030. The 2030 target serves as a benchmark goal on the way to achieving the GHG reductions goal set by former Governor Schwarzenegger via Executive Order S-3-05 (i.e., 80% below 1990 greenhouse gas emissions levels by 2050). (CCC, 2018a)

13. *Senate Bill 32*

On September 8, 2016, Governor Jerry Brown signed the Senate Bill (SB) 32 and its companion bill, Assembly Bill (AB) 197. SB 32 requires the state to reduce statewide GHG emissions to 40% below 1990 levels by



2030, a reduction target that was first introduced in Executive Order B-30-15. The new legislation builds upon the AB 32 goal of 1990 levels by 2020 and provides an intermediate goal to achieving S-3-05, which sets a statewide greenhouse gas reduction target of 80% below 1990 levels by 2050.

At this time, no further analysis is necessary or required by CEQA as it pertains to Executive Order B-30-15 and SB 32 because the Project's horizon (buildout) year would occur in 2020. Pursuant to guidance from the Association of Environmental Professionals (AEP), GHG emissions "...should be identified for the Project horizon year and lead agencies should consider the Project horizon year when applying a threshold of significance" (AEP, 2016, p. 32). Because the Project's opening year would be 2020, the Project's GHG emissions are instead evaluated against California Assembly Bill 32 (AB 32), which identifies a target to reduce GHG emissions statewide to 1990 levels by 2020. Demonstrating compliance with AB 32's target for 2020 also would show that the Project would not inhibit the State's ability to achieve the 2030 target established by SB 32, as the bulk of the GHG reductions needed by 2030 would occur at the state and regional levels and compliance with the AB 32 threshold would demonstrate that the Project is on trajectory to meet the year 2030 SB 32 emissions target.

D. Regional

1. County of San Bernardino Greenhouse Gas Reduction Plan (2011)

The County of San Bernardino adopted a Greenhouse Gas Reduction Plan in September 2011, which provides guidance on how to analyze GHG emissions and determine significance during the CEQA review of proposed development projects within the County of San Bernardino. The Greenhouse Gas Reduction Plan includes a GHG Development Review Process (DRP) that specifies a two-step approach in quantifying GHG emissions. First, a screening threshold of 3,000 metric tons of carbon dioxide equivalent (MTCO_{2e}) per year is used to determine if additional analysis is required. If a proposed project were to produce GHG emissions in exceedance of 3,000 MTCO_{2e} per year, then the Project is required to either achieve a minimum of 100 points per the Screening Tables provided within the Greenhouse Gas Reduction Plan or achieve a 31% reduction in MTCO_{2e} emissions over 2007 emissions levels. (San Bernardino County, 2011)

3.J.2 METHODOLOGY FOR CALCULATING GREENHOUSE GAS EMISSIONS

CEQA Guidelines Section 15064.4(a)(1) states that a CEQA lead agency may use a model or methodology to quantify GHG emissions associated with a project. The California Emission Estimator Model (CalEEMod), developed by the SCAQMD in conjunction with the California Air Pollution Control Officers Association (CAPCOA) and other California air districts, was used to quantify GHG emissions from Project-related construction and operational activities. The most recent version (v2016.3.1) of CalEEMod was released on October 17, 2017 and was utilized in quantifying GHG emissions for the Project (HDR, 2018, p. 27). Output from CalEEMod for both construction and operational activity are provided in Appendix A of DREIR *Technical Appendix B*.

3.J.2.1 METHODOLOGY FOR ESTIMATING PROJECT-RELATED CONSTRUCTION EMISSIONS

For the purposes of determining whether or not GHG emissions from affected projects are adverse, SCAQMD specifies that Project emissions must include direct, indirect, and, to the extent information is available, life cycle emissions during construction and operation (HDR, 2018, p. 27). The Project's construction-related



GHG emissions were calculated using the same methodology, construction schedule information, and equipment fleet information that were used to calculate construction-related criteria air pollutant emissions, as previously described in DREIR Subsection 4.2, *Air Quality*. Refer to DREIR Subsection 3.B, *Air Quality*, and DREIR *Technical Appendix B* for a detailed description of the methodology used to calculate the Project's construction-related GHG emissions.

In accordance with the SCAQMD recommendations, the Project's construction-related GHG emissions were quantified and amortized over a 30-year period and added to the Project's annual operational phase GHG emissions (HDR, 2018, p. 35).

3.J.2.2 METHODOLOGY FOR ESTIMATING PROJECT-RELATED OPERATIONAL EMISSIONS

The Project's operational GHG emissions were calculated using the same methodology that was used to calculate operational criteria air pollutant emissions, and as previously described in detail in DREIR Subsection 3.B, *Air Quality*, and DREIR *Technical Appendix B* for a detailed description of the methodology used to calculate the Project's operational GHG emissions.

3.J.3 THRESHOLDS OF SIGNIFICANCE

In order to assess the significance of a proposed Project's environmental impacts, it is necessary to identify quantitative or qualitative thresholds that, if exceeded, would constitute a finding of significance. As discussed above in Subsection 3.J.2, while estimated Project-related GHG emissions can be calculated, because of the small quantity in proportion to worldwide sources of GHG, the direct impacts of the Project-related emissions of GCC and global warming cannot be determined on the basis of available science. There is no evidence at this time that would indicate that the emissions from a project the size of the Project would directly or indirectly contribute to GCC in a cumulatively-considerable manner.

The CEQA Guidelines indicate that a project would result in a significant impact on climate change if a project were to:

- a) *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; and/or*
- b) *Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases*

The above-listed thresholds are derived directly from Appendix G to the CEQA Guidelines and address a development project's potential contribution to GCC. Neither the CEQA Statute nor the CEQA Guidelines prescribe specific methodologies and significance criteria for determining the significance of GHG emission impacts. The CEQA Guidelines emphasize the lead agency's discretion to determine the appropriate thresholds consistent with the manner in which other impact categories are handled in CEQA. CEQA case law has upheld local agencies' discretion to determine the significance of GHG emissions impacts.

3.J.4 SIGNIFICANCE IMPACT CRITERIA

The County of San Bernardino adopted a Greenhouse Gas Reduction Plan in September 2011, which provides guidance on how to analyze GHG emissions and determine significance during the CEQA review of proposed



development projects within the County of San Bernardino. The Greenhouse Gas Reduction Plan includes a GHG Development Review Process (DRP) that specifies a two-step approach in quantifying GHG emissions. First, a screening threshold of 3,000 metric tons of carbon dioxide equivalent (MTCO_{2e}) per year is used to determine if additional analysis is required. If a proposed project were to produce GHG emissions in exceedance of 3,000 MTCO_{2e} per year, then the Project is required to either achieve a minimum of 100 points per the Screening Tables provided within the Greenhouse Gas Reduction Plan or achieve a 31% reduction in MTCO_{2e} emissions over 2007 emissions levels. In accordance with the Greenhouse Gas Reduction Plan, if the Project were to emit less than 3,000 MTCO_{2e} per year, reach the 100-point minimum score on the screening table, or reduce emissions by 31% from 2007 emissions, the Project would be determined to have a less-than-significant impact for GHG emissions.

3.J.5 IMPACT ANALYSIS

Threshold a: *Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?*

Construction of the proposed Project would result in temporary emissions associated with diesel engine combustion from mass grading and site preparation construction equipment. Construction-related GHG emissions include site preparation, excavation, and associated construction of the proposed church facilities.

The Project site would be cleared, graded, and constructed over the course of approximately two years. Table 3.J-3, *GHG Emissions from Project-Related Construction*, quantifies the expected GHG emissions from Project-related construction activities. As shown, construction of the proposed Project would generate approximately 1,500 MTCO_{2e}. Amortized over a 30-year period, the approximate life of the Project, the yearly contribution to GHG from the construction of the Project would be approximately 50 MTCO_{2e} per year.

Table 3.J-3 GHG Emissions from Project-Related Construction

Year	Pollutant Emissions (Metric Tons/year)			
	CO ₂	CH ₄	N ₂ O	CO _{2e}
2018	577.5	0.1	0.0	579.7
2019	900.1	0.1	0.0	902.7
2020	18.0	0.0	0.0	18.0
Total	1,495.6	0.2	0.0	1,500.4
Amortized over 30 years	49.8	0.004	0.0	50.0

Source: (HDR, 2018, Table 5-5)

The Project's annual GHG emissions are summarized in Table 3.J-4, *Project's Annual GHG Emissions*. As shown in Table 3.J-4, based on the reasonably foreseeable maximum operating capacity of the Project and on traffic generation rates determined in the Project's Traffic Impact Analysis (DREIR *Technical Appendix H*), the Project has the potential to generate a total of approximately 1,139.6 MTCO_{2e} per year.

Of the Project's total annual GHG emissions, approximately 636.6 MTCO_{2e} (56%) would be from mobile sources (passenger cars). The remaining approximately 503 MTCO_{2e} (44%) of the Project's total annual GHG emissions would be from all other Project sources combined (construction, area, energy, waste, and water usage). The Project's total annual GHG emissions would not exceed the County's GHG Reduction Plan



threshold of 3,000 MTCO₂e/year and would therefore not generate substantial GHG emissions – neither directly or indirectly – that would have a significant impact on the environment. Thus, the Project would not result in cumulatively-considerable impacts with respect to GHG emissions.

Table 3.J-4 Project's Annual GHG Emissions

Source	Pollutant Emissions (Metric Tons/year)					
	Bio-CO ₂	NBio-CO ₂	CO ₂	CH ₄	N ₂ O	CO ₂ e
Construction Emissions Amortized over 30 Years	0.0	49.9	49.9	0.0	0.0	50.0
Operational Emissions						
Area Sources	0.0	0.0	0.0	0.0	0.0	0.0
Energy Sources	0.0	292.8	292.8	0.01	0.0	294.0
Mobile Sources	0.0	635.8	635.8	0.03	0.0	636.6
Waste Sources	55.3	0.0	55.3	3.27	0.0	137.1
Water Usage	0.5	19.8	20.2	0.05	0.0	21.9
Total Operational Emissions	55.8	948.3	1,004.1	3.4	0.0	1,089.6
Total Project Emissions	55.8	998.2	1,054.0	3.4	0.0	1,139.6

Note: Columns may not add up due to rounding.

Source: (HDR, 2018, Table 5-6)

Threshold b: Would the Project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

The Project would comply with a number of regulations, policies, plans, and policy goals that would reduce GHG emissions, including the County of San Bernardino Greenhouse Gas Reduction Plan (as shown above under Threshold VIII-a), Title 24 of the California Building Standards Code (CBSC), CARB Scoping Plan, Assembly Bill 32 (AB 32), and Senate Bill 32 (SB 32), which are the only plans, policies, or regulations applicable to the Project. For more information on these regulations as well as other state-wide plans, policies, and regulations associated with GHG emissions that are not directly applicable to the Project, refer to *Technical Appendix B*.

The Project would include the construction and operation of a church campus with a sports field and sports courts, which would include contemporary, energy-efficient/energy-conserving design features and operational procedures. A church campus is not an inherently energy-intensive land use and the total Project energy demands would be comparable to, or less than, other projects of similar scale and configuration due to the Project's modern construction and requirement to be constructed in accordance with the most recent CBSC. The CBSC includes the California Energy Code, or Title 24, Part 6 of the California Code of Regulations, also titled *The Energy Efficiency Standards for Residential and Nonresidential Buildings*. The California Energy Code was established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated approximately every three years to improve energy efficiency by incorporating new energy efficiency technologies and methods. The Project would be required to comply with all applicable provisions of the CBSC. As such, the Project's energy demands would be minimized through design features and operational programs that, in aggregate, would ensure that Project energy efficiencies would comply with – or exceed – incumbent CBSC energy efficiency requirements, thereby minimizing GHG emissions produced



from energy consumption. The Project has no potential to be inconsistent with the mandatory regulations of the CBSC because compliance is required by state law.

Projects that are consistent with the CARB Scoping Plan would be consistent with the rules and regulations required by AB 32. The Project would generate GHG emissions from a variety of sources which would all emit CO₂, CH₄, and N₂O. GHGs could also be indirectly generated by incremental electricity consumption and waste generation from the Project. As stated previously, the CARB Scoping Plan recommends strategies for implementation at the statewide level to meet the goals of AB 32. The CARB Scoping Plan recommendations serve as statewide measures to reduce GHG emissions levels. Project consistency with applicable CARB Scoping Plan GHG emissions reduction measures would be met through structural and non-structural methods (e.g., water use efficiency, vehicle smog compliance, green building standards, energy efficiency, etc.). As such, the Project would not conflict with the GHG reduction measures associated with AB 32, and a less-than-significant impact would occur.

In April 2015, Governor Edmund Brown Jr. signed Executive Order (EO) B-30-15, which advocated for a statewide GHG-reduction target of 40% below year 1990 levels by 2030 and 80% below 1990 levels by 2050. In September 2016, Governor Brown signed the Senate Bill (SB) 32. SB 32 formally established a statewide goal to reduce GHG emissions to 40% below year 1990 levels by 2030. To date, no statutes or regulations have been adopted to translate the year 2050 GHG reduction goal into comparable, scientifically-based statewide emission reduction targets.

The Project does not interfere with SB 32's target of reducing statewide GHG emissions to 40% below 1990 levels by 2030 because it does not interfere with the state's implementation of GHG reduction plans described in the CARB's Updated Scoping Plan, including the state providing for 12,000 MW of renewable distributed generation by 2020, the California Building Commission mandating net zero energy homes in the building code after 2020, or existing building retrofits under AB 758.

According to research conducted by the Lawrence Berkeley National Laboratory and supported by the CARB, California, under its existing and proposed GHG reduction policies, is on track to meet the years 2020 and 2030 reduction targets established by AB 32 and SB 32, respectively (Berkeley, 2015). As described above, the Project would not conflict with or obstruct implementation of the CARB Scoping Plan; therefore, the Project would not interfere with the State's ability to achieve the year 2030 GHG-reduction target established by SB 32.

Rendering a significance determination for year 2050 GHG emissions relative to EO B-30-15 would be speculative because EO B-30-15 establishes a goal 32 years into the future; no agency with GHG subject matter expertise has adopted regulations to achieve the statewide goal at the Project-level; and, available analytical models cannot presently quantify all Project-related emissions in those future years. Further, due to the technological shifts anticipated and the unknown parameters of the regulatory framework in 2050, available GHG models and the corresponding technical analyses are subject to limitations for purposes of quantitatively estimating the Project's emissions in 2050. Accordingly, an analysis of the Project's consistency with the 2050 target established by EO B-30-15 would be too speculative for evaluation (CEQA Guidelines § 15145).



As described on the preceding pages, the Project would not conflict with the State's ability to achieve the State-wide GHG reduction targets defined in AB 32 and would be consistent with applicable policies and plans related to GHG emissions reductions. Therefore, the Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs, and would result in a less-than-significant impact.

3.J.6 CUMULATIVE IMPACTS

GCC occurs as the result of global emissions of GHGs. An individual project such as the proposed Project does not have the potential to result in direct and significant GCC-related effects in the absence of cumulative sources of GHGs. The CEQA Guidelines also emphasize that the effects of GHG emissions are cumulative and should be analyzed in the context of CEQA's requirements for cumulative impacts analysis (See CEQA Guidelines § 15130(f)).

Accordingly, the Project-specific impact analysis provided within this Subsection reflects a cumulative impact analysis of the Project's GHG emissions and concludes that because the Project would produce 1,139.6 MTCO_{2e} per year, the Project's emissions would not exceed the County's threshold of 3,000 MTCO_{2e} per year. Therefore, the Project would not result in a cumulatively-considerable impact with respect to its GHG emissions. As described above in the response to Threshold b, the Project would result in a less-than-cumulatively considerable impact with respect to a potential conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

3.J.7 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION

Threshold a: Less-than-Significant Impact. The Project's total annual GHG emissions would not exceed the County's GHG Reduction Plan threshold of 3,000 MTCO_{2e}/year and would therefore not generate substantial GHG emissions – neither directly or indirectly – that would have a significant impact on the environment.

Threshold b: Less-than-Significant Impact. The Project would not conflict with applicable regulations, policies, plans, and policy goals adopted for the purpose of reducing GHG emissions.

3.J.8 MITIGATION MEASURES

3.J.8.1 APPLICABLE COUNTY REGULATIONS AND DEVELOPMENT REQUIREMENTS

There are no applicable regulations and design requirements that are required by San Bernardino County related to greenhouse gas emissions.

3.J.8.2 MITIGATION MEASURES

No mitigation measures are required.



4.0 ALTERNATIVES

Under CEQA, the identification and analysis of alternatives to a project is a fundamental aspect of the environmental review process. *Public Resources Code* Section 21002.1(a) establishes the need to address alternatives in an EIR, in addition to determining a project's significant environmental impacts, and indicating potential means of mitigating or avoiding those impacts by stating in part that "the purpose of an environmental impact report is to identify alternatives to the project."

Direction regarding the definition of project alternatives is provided in the CEQA Guidelines Section 15126.6(a) as follows:

An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives.

CEQA Guidelines Section 15126.6(b) emphasize that the selection of project alternatives be based primarily on the ability to reduce significant impacts relative to the proposed Project, "even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly." The Guidelines Section 15126.6(f) further direct that the range of alternatives be guided by a "rule of reason," such that only those alternatives necessary to permit a reasoned choice are addressed.

In selecting project alternatives for analysis, potential alternatives must pass a test of feasibility. CEQA Guidelines Section 15126.6(f)(1) states that:

Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site . . .

Beyond these factors, CEQA Guidelines Section 15126.6 require the analysis of a "no project" alternative and an evaluation of alternative location(s) for the project, if feasible. Based on the alternatives analysis, an environmentally superior alternative is to be designated. As stated in CEQA Guidelines Section 15126.6(e)(2), if the environmentally superior alternative is the No Project Alternative, then the EIR shall identify an environmentally superior alternative among the other alternatives.

For each of the alternatives, the analysis includes the following:

- a description of the alternative;
- a discussion of the impacts of the alternative and evaluation of the significance of those impacts; and
- an evaluation of the alternative relative to the proposed Project, specifically addressing project objectives, feasibility, the elimination or reduction of impacts, and comparative merits.



The following alternatives were selected and are discussed in this Chapter:

- No Project/No Build Alternative;
- No Project/Feasible Development Alternative; and
- Reduced Project/Alternative Site Design Alternative.

In addition, CEQA Guidelines Section 15126.6(c) requires that an EIR identify any alternatives that were considered for analysis but rejected as infeasible and discuss the reasons for their rejection. Of the various alternatives available for evaluation, the process of selecting project alternatives to be analyzed in this Draft Revised EIR commenced with identification of the significant effects associated with the proposed Project and a review of the basic objectives established for the Project.

Potential development of 236,966 square feet of manufacturing or warehouse use could occur on the Project site utilizing the same development area as the proposed Project (13.6 acres) at a maximum FAR of 0.4:1 and subject to a Conditional Use Permit. However, this alternative, which would have substantially higher development density than the proposed Project, would not meaningfully reduce the impacts identified for the proposed Project. Furthermore, development of the site with manufacturing or warehouse use would not fulfill a primary objective of the Project to relieve space constraints and address other deficiencies at existing Church of the Woods facilities. For these reasons this alternative was rejected and not carried forward for further analysis in the DREIR.

CEQA Guidelines Section 15126.6(f)(2) also requires that an alternative location for the Project be identified. However, in those cases in which it is determined that no feasible alternative locations exist, the Lead Agency must disclose the reasons for this conclusion and include these reasons in the DREIR.

The applicant had considered the following alternative locations prior to purchasing the Project site: Santa's Village, Mill Pond, and Alpine Conference Center. At the time the former Santa's Village, located in Skyforest, was for sale the church had made an offer to purchase a portion of the property. However, another buyer made an offer on the entire property and that offer was accepted and the sale closed. The Mill Pond site, located in Cedar Glen, was not considered suitable for the proposed Project due to site topography and potential incompatibility with surrounding residential uses in terms of noise and parking. The applicant had discussions with the owners of the Alpine Conference Center, located in Blue Jay, to buy a portion of the property but the owners changed their mind and the property was never put on the market.

The following alternative locations and alternative uses that were proposed during the public scoping meeting and NOP public comment period have been rejected as infeasible or substantially incorporated into another alternative.

Two alternative locations were proposed, the CEDU School site and the Cedar Glen Redevelopment area. The CEDU School site is located at 3500 Seymour Road in Running Springs, approximately 7 miles east of the Project site. The school went out of business and the site is now operated as the Running Springs Retreat Center and is not for sale. The Cedar Glen Redevelopment Area includes 5,639 parcels on approximately 837 acres within the Cedar Glen community. The Redevelopment Project area, located approximately 6 miles east



of the Project site, was established in response to the destruction that occurred from the “Old Fire” in 2003. The Mill Pond property, discussed above, was within this Redevelopment Area. However, due to economic constraints it would not be feasible for the applicant to investigate, acquire, control, or otherwise have access to these parcels or properties considering that the Project Applicant already owns the Project site.

One alternative site use has been proposed: the permanent conservation of the site. Conservation of the site would retain the site in its present condition for long-term support of habitat and open space values. This is essentially the same as the No Project/No Build Alternative described below. In addition, an alternative that would conserve the site would not fulfill the basic objectives of the Project. For these reasons, a conservation alternative is not being further evaluated.

4.1 ALTERNATIVE 1: NO PROJECT/NO BUILD ALTERNATIVE

4.1.1 DESCRIPTION

In accordance with the State CEQA Guidelines, the No Project Alternative for a development project on an identifiable property consists of the circumstance under which the Project does not proceed. Section 15126.6(e)(3)(B) of the Guidelines states that, “in certain instances, the no project alternative means ‘no build’ wherein the existing environmental setting is maintained.” For purposes of this analysis, the No Project/No Build Alternative assumes this condition. Accordingly, the No Project/No Build Alternative assumes that no project is approved, and no grading or development occurs within the Project site. Thus, the physical condition of the Project site would remain as it is today, as undeveloped forested land. Accordingly, this No Project/No Build Alternative would support conditions on the Project site similar to those described under the existing conditions heading for each environmental issue category analyzed in Chapter 3.0 of this DREIR.

4.1.2 IMPACT ANALYSIS

A. Aesthetics

Under this alternative, the existing montane coniferous forest vegetation and hilly to steep topography that characterize the Project site would remain undeveloped and unchanged. Views of undeveloped forested land from Highway 18, a designated scenic highway, would not be altered or interrupted by views of the entry road, parking, landscaping, or structures associated with the proposed Project. Although the proposed Project would result in less than significant impacts associated with aesthetics, the implementation of this Alternative would avoid any adverse effects that would result from the development of the Project site.

B. Air Quality

Under this alternative, no project construction or operation-related emissions would occur. As a result, this alternative would avoid significant unavoidable construction impacts associated with regional NO_x and ROC emissions and localized PM₁₀ and PM_{2.5} emissions that would occur under the proposed Project. This alternative would also avoid significant ozone impacts associated with the proposed Project prior to mitigation. Therefore, air quality impacts would be less under this alternative than those identified for the proposed Project.



C. Biological Resources

Under this alternative, no construction activities would occur on the Project site. As such, there would be no direct impacts to jurisdictional waters, southern rubber boa habitat, San Bernardino flying squirrel that were identified for the proposed Project. In addition, significant unavoidable cumulative impacts on the southern rubber boa and the San Bernardino flying squirrel would be avoided under this alternative. Therefore, impacts to biological resources would be avoided under this alternative.

D. Geology and Soils

Under this alternative, grading activities, soil erosion, and exposure of people and structures to potential seismic and landslide activities would not occur. Although these impacts would occur under the proposed Project, they would be less than significant with implementation of the mitigation measures identified in Subsection 3.D of this REIR. Nevertheless, geology and soils impacts would be reduced under this alternative than those identified for the proposed Project.

E. Hazards and Hazardous Materials

Under this alternative, demand on fire protection services and water systems (to meet fire flow requirements) would be avoided. In addition, this alternative would have no effect on emergency access and evacuation. Although development of the proposed Project would increase demand for fire protection services and infrastructure and potentially expose people and structures to wildland fire hazards, these impacts would be less than significant with adherence to standard and non-standard conditions of approval imposed by the Crest Forest Fire Protection District (CFFPD). Nonetheless, these impacts identified for the proposed Project would be less under the No Project/No Build Alternative.

F. Hydrology, Water Quality, and Water Supply

In contrast to the proposed Project, under this alternative, potential impacts on hydrology and drainage, water supply, and water quality would not occur. Erosion, surface water runoff, and water quality impacts from construction and operation impacts would be avoided. Furthermore, no additional water demand would be generated. Although impacts related to hydrology, water quality, and water supply were considered less than significant for the proposed Project, these impacts would be less under the No Project/No Build Alternative.

G. Land Use

Under this alternative, the Project site would remain in its existing condition as undeveloped, forested land with hilly to steep terrain. As there would be no development at the Project site there would be no requirement for a conditional use permit under the No Project/No Build Alternative. Therefore, impacts related to land use issues would be less under this alternative than those identified for the proposed Project.

H. Noise

Under this alternative, construction and development of the proposed Project would not occur. As there would be no operation of construction equipment on the Project site, this alternative would avoid the significant unavoidable construction noise impacts as well as the less-than-significant operational noise impacts that



would occur under the proposed Project. Therefore, noise impacts would be less under this alternative than those identified for the proposed Project.

I. Transportation and Circulation

Under this alternative, no vehicular traffic would be generated at the Project site. Accordingly, the implementation of this alternative would avoid the Project's significant and unavoidable direct and cumulatively considerable traffic impacts that would occur during the operation of the proposed Project. Therefore, traffic impacts would be less under this alternative than those identified for the proposed Project.

J. Global Climate Change

Under this alternative, no project construction or operation-related GHG emissions would occur due to site development. Although Project impacts related to global climate change would be less than significant under the proposed Project, any adverse impacts associated with GHG emissions would be avoided under the No Project/No Build Alternative.

4.1.3 CONCLUSION AND RELATIONSHIP OF THE ALTERNATIVE TO PROJECT OBJECTIVES

Although the No Project/No Build Alternative would not result in any significant environmental impacts and would eliminate significant and unavoidable biological resources, construction noise and traffic impacts associated with the proposed Project, it would not achieve any of the Project objectives. Specifically, the No Project/No Build Alternative would not relieve deficiencies at the existing Church of the Woods facilities; provide a new facility for worship services, meetings, and recreational activities; provide spiritual, educational, and recreational activities in a natural setting; nor provide meeting, classroom, and recreational facilities for the community. A comparative summary of the environmental impacts associated with the No Project/No Build Alternative with the environmental impacts anticipated under the proposed Project is provided in Table 4-1 on page 4-15.

4.2 ALTERNATIVE 2: NO PROJECT/FEASIBLE DEVELOPMENT ALTERNATIVE

4.2.1 DESCRIPTION

This alternative assumes that the Project with an industrial use under its existing land use and zoning designations without the need for discretionary approvals. The Community Industrial (IC) District provides a range of land uses from those that are permitted (such as agricultural support services), those that are permitted but require a Site Plan Review (such as manufacturing if 10,000 square feet or less), those that are subject to a Minor Use Permit (such as storage or warehouse facilities), and those that require a Conditional Use Permit (such as manufacturing operations greater than 10,000 square feet). Based on the 13.6-acre size of the site and a maximum FAR of 0.4, the Project site could theoretically accommodate 236,966 square feet of light manufacturing or warehouse use, subject to a Minor Use Permit or Conditional Use Permit (County of San Bernardino, 2018, Table 82-20A). However, open space, set back, fuel modification, and slope density requirements would place additional restrictions on the amount of building area that could feasibly be developed on the site. The most restrictive of these is the slope density locational criteria for the IC District, which specifies uses should be located on areas of stable soil with average slope of 10% or less. The majority of the Project site consists of slopes greater than 10%. Therefore, only two areas within the Project site would



have slopes less than 1%, thereby meeting the minimum lot size requirements of the IC District. Both areas within the Project site that would have a slope of less than 10% occur along the southern boundary of the Project site, just north of Highway 18. It is also estimated for purposes of this analysis and based on the type of land use subject to a Minor Use Permit that the maximum building area would not exceed 10,000 square feet of manufacturing or warehouse use and that the development would occur within 5.0 acres in the southern/central portion of the Project site.

4.2.2 IMPACT ANALYSIS

A. Aesthetics

Under this alternative only 5.0 acres would be developed with a manufacturing or warehouse use, reducing the amount of grading, tree removal and building coverage that would occur in comparison to the proposed project. Depending on the final site design, these uses may not be visible from Highway 18 (a scenic highway). However, some grading would be required to provide site access that would be visible from Highway 18. Although manufacturing or warehouse operations are required to be fully screened or enclosed, and although this structure would be constructed within a smaller development envelope compared to the proposed Project, the nature of the manufacturing/warehouse use combined with the location of the development adjacent to Highway 18 could result in an increase in the potential for a significant visual impact. Therefore, aesthetic impacts would be greater under this alternative.

B. Air Quality

Under the proposed Project, impacts associated with air quality would be less than significant during Project construction and operation. The implementation of this alternative would result in a reduction in construction emissions due to the reduction of the amount of grading that would be required as well as the reduction of the duration of construction activities that would occur compared to the larger proposed Project. As a result, this alternative would incrementally reduce the proposed Project's less-than-significant construction air quality emissions. Similarly, the less-than-significant operational emissions identified for the proposed Project would be incrementally reduced under this alternative, due to a smaller building area and fewer vehicular trips associated with the land use. However, a manufacturing or warehouse use would change the vehicle fleet mix and generate additional heavy-duty truck trips, thereby increasing diesel PM₁₀ and PM_{2.5} emissions. In addition, a warehouse or manufacturing use could potentially introduce other sources of toxic air emissions, resulting in greater air toxic operation impacts than identified for the proposed Project. A manufacturing or warehouse use could also result in odor impacts, which were not identified for the proposed Project. Considering all of the above, overall construction and operation air quality impacts associated with the No Project/Feasible Development Alternative would be less than identified for the proposed Project, primarily due to the reduced Project size.

C. Biological Resources

Under this alternative, development of the site would be limited to five acres. Therefore, based on the reduction in the amount of land that would be physically disturbed by the implementation of this alternative, this alternative would reduce or avoid the significant impacts to jurisdictional waters and the cumulatively considerable significant and unavoidable impacts to southern rubber boa habitat, and the San Bernardino flying



squirrel that were identified for the proposed Project. Accordingly, the overall impacts on biological resources would be less under this alternative than identified for the proposed Project.

D. Geology and Soils

This alternative would involve construction of a 10,000 square foot building on 5.0 acres for manufacturing or warehouse use. Compared to the proposed Project, this alternative would reduce the area of site disturbance and number of people and structures exposed to potential geologic hazards and would avoid development within the small landslide area in the southeastern portion of the site. Therefore, this alternative would further reduce the less-than-significant geology and soils impacts and avoid a potentially significant impact related to landslides and slope stability identified for the proposed Project.

E. Hazards and Hazardous Materials

This alternative would reduce demand on fire protection services and water systems due to the reduced size and intensity of development. However, this alternative would still be located in a high fire hazard area and a manufacturing or warehouse use could introduce new sources of flammable materials and potentially increase fire hazard. Similar to the proposed Project, these impacts would be less than significant with adherence to standard and non-standard conditions of approval imposed by the CFFPD.

F. Hydrology, Water Quality, and Water Supply

Under this alternative, potential impacts on hydrology and drainage, water supply, and water quality would be reduced compared to the proposed Project. Erosion, surface water runoff, and water quality impacts from construction and operation would be reduced due to the smaller area of site disturbance and impervious surface. In addition, impacts to jurisdictional waters would be likely to be avoided. Water demand associated with the reduced building size and manufacturing use could be similar or greater than the proposed Project, but is expected to be within Crestline-Lake Arrowhead Water Agency projections. Therefore, impacts associated with hydrology would be less than significant and less than the proposed Project. However, similar to the proposed Project, compliance with regulatory requirements for the National Pollutant Discharge Elimination System (NPDES), Regional Water Quality Control Board (RWQCB), and County of San Bernardino would ensure that these impacts would be less than significant.

G. Land Use

Under this alternative, development would be limited to a 10,000 square foot manufacturing or warehouse building on 5.0 acres. Development of this alternative would require a Minor Use Permit. Approval of a Minor Use Permit would require the following findings: the size and shape of the site is adequate for the proposed use; the site has adequate access; the proposed use would not have a substantial adverse effect on abutting property; the proposed use is consistent with the General Plan; there is supporting infrastructure to accommodate the proposed development; the lawful conditions stated in the approval are deemed necessary to protect the public health and general welfare; and the site has the potential for the use of solar energy systems and passive heating and cooling. Additional findings are also required before approving a Minor Use Permit: that standards or conditions would adequately mitigate environmental impacts; the Project does not include phased development; and the Project is not likely to result in controversy.



This alternative would only develop a small percentage of the Project site compared to the area that would be developed under the proposed Project. The reduced area of development would generally result in a lower generation of vehicular trips which would be likely to decrease the severity of a potential conflict with General Plan and Lake Arrowhead Community Plan policies related to levels of service within the Project study area roadways. Therefore, while the implementation of this alternative could still result in significant and unavoidable impacts associated with a conflict with the General Plan and Lake Arrowhead Community Plan policies, this alternative would result in less land use impacts than identified for the proposed Project.

H. Noise

Under this alternative, construction noise impacts would be reduced compared to the proposed Project because less grading and less construction equipment would be required and the overall duration of construction would be reduced. In addition, due to the existing site topography, the area of construction activities would be located further away from residential uses to the west with intervening topography and vegetation, thereby avoiding significant unavoidable construction noise impacts associated with the proposed Project.

Long-term operational noise impacts to residential areas to the west would be less than those identified for the proposed Project because only a portion of the site would be developed and the manufacturing or warehouse use would be located further away than the proposed sports field. In addition, manufacturing or warehouse uses are required to be wholly enclosed and screened which, in addition to intervening topography and vegetation, would further reduce noise impacts on residential uses. Therefore, the less-than-significant on-site operational noise impacts would be reduced under this alternative.

As with the proposed Project, roadway noise along Highway 18 would increase under this alternative. Although this alternative would generate substantially fewer vehicle trips, additional truck trips could be generated from a warehouse or manufacturing use in comparison to the passenger vehicle trips that would be generated by the proposed Project. Overall, noise impacts from roadway noise are expected to be similar to or less than the proposed Project and less than significant.

I. Transportation and Circulation

Under this alternative, construction traffic impacts would be reduced compared to the proposed Project since there would be less overall development and fewer construction workers traveling to the Project site. Nevertheless, construction traffic under this alternative has the potential to delay or disrupt existing traffic along Highway 18. Similar to the proposed Project, mitigation measures would ensure that traffic impacts during construction would be less than significant.

Since the No Project/Feasible Development Alternative proposes a warehouse building, the most appropriate ITE code to determine daily trip generation would be 110—General Light Industrial, which assumes 4.96 daily trips per thousand square feet (TSF) of building space. Since the alternative proposes a 10,000 s.f. warehouse, the daily trip generation can be calculated to approximately 47 daily trips (ITE, 2017). However, as with the proposed Project, the implementation of this alternative would result in the contribution of vehicular trips to Caltrans facilities that are experiencing deficient LOS in the existing and/or projected conditions which could result in similar significant and unavoidable direct and cumulatively considerable impacts to Caltrans roadway facilities within the study area. Moreover, the implementation of a warehouse/manufacturing use on the



Project site would generate more vehicular trips during the work days compared to the generation of vehicular trips primarily on the weekends as would occur with the proposed religious institution under the proposed Project. Accordingly, while the implementation of this alternative could result in direct and cumulatively considerable significant and unavoidable traffic impacts, the reduction in the overall number of vehicular trips generated by this land use would result in an overall reduction in the potential traffic impacts associated with the proposed Project.

J. Global Climate Change

Under this alternative, construction emissions that generate GHGs would be reduced as less construction activity would occur compared to the proposed Project. Similar to the proposed Project, this alternative would result in a less-than-significant level of construction-related GHG emissions.

Operation-related GHG emissions would be reduced compared to the proposed Project because the number of vehicle trips and amount of building area would be reduced. However, depending on the type of manufacturing or warehouse use, GHG emissions generated through consumption of natural gas, electricity, and water could be similar or greater than the proposed Project and thus result in a slightly greater impact. Overall, impacts on global climate change would be reduced compared to the proposed Project.

4.2.3 CONCLUSION AND RELATIONSHIP OF THE ALTERNATIVE TO PROJECT OBJECTIVES

The No Project/Feasible Development Alternative would reduce or eliminate significant and unavoidable impacts from construction noise, and cumulatively considerable significant and unavoidable impacts on the southern rubber boa and the San Bernardino flying squirrel compared to the proposed Project. This alternative would also reduce less than significant impacts of the proposed Project associated with biological resources, geology and soils, hazards, hydrology, transportation, and global climate change. Although this alternative would result in an incremental reduction in the severity of cumulatively considerable traffic noise impacts, these impacts could potentially remain significant and unavoidable.

Even though this alternative would eliminate some significant and unavoidable impacts associated with the proposed Project, it would not achieve any of the Project objectives. Specifically, the No Project/Feasible Development Alternative would not relieve deficiencies at the existing Church of the Woods facilities; provide a new facility for worship services, meetings, and recreational activities; provide spiritual, educational, and recreational activities in a natural setting; and provide meeting, and recreational facilities for the community. A comparative summary of the environmental impacts associated with the No Project/Feasible Development Alternative with the environmental impacts anticipated under the proposed Project is provided in Table 4-1 on page 4-15.

4.3 ALTERNATIVE 3: REDUCED PROJECT/ALTERNATIVE SITE DESIGN ALTERNATIVE

4.3.1 DESCRIPTION

The Reduced Project/Alternative Site Design Alternative would reduce the major components and capacity of the Project by approximately 25% while substantially avoiding grading and disturbance of natural vegetation within an approximately 200-foot setback along Highway 18. Grading and clearance of vegetation along the highway would be limited to what is required to construct the entry and emergency access roads. This



alternative would also minimize disturbance of natural vegetation and increase the setback between proposed sports field and existing residential uses located along the Project's southwestern Project boundary while also substantially avoiding alteration of the natural drainage that runs from the southwest to the northeast corner of the site. A more specific description of this alternative is provided below.

This Alternative would reduce the larger buildings proposed by the Project by approximately 25%, including the youth center gymnasium, assembly building, and parking lot. The size of the youth center would be reduced from 27,364 square feet to 20,523 square feet and the assembly building would be reduced from 41,037 sq. ft. to 30,778 sq. ft. The reduction of the worship center would result in a corresponding reduction in the amount of required parking lot area.

An approximate 200-foot setback would be provided along Highway 18 with grading and disturbance limited to provision of an entry road and emergency access road. The sports field would not be reduced in size or relocated, as it is serving as a detention basin. However, the 25% reduction of the parking lot, assembly building and youth center would reduce grading and clearance of natural vegetation along the southwest boundary of the site. By reducing parking and reconfiguring uses in the southern portion of the site, the natural drainage area that runs from the southwest to the northeast corner of the site would be substantially preserved. For purposes of this analysis it is assumed that overall grading and disturbance of the site would be reduced by approximately 2%.

4.3.2 IMPACT ANALYSIS

A. Aesthetics

Under the Reduced Project/Alternative Site Design Alternative, the overall area of disturbance would be reduced by 25% and the majority of grading and clearance of vegetation along Highway 18 would be substantially avoided compared to the proposed Project. Although some construction activity would be visible from the highway during construction of the entrance and emergency access roads, the extent and duration of the views of the construction activity would be reduced compared to the less-than-significant construction impacts that would occur compared to the proposed Project.

The grading and removal of vegetation would be lessened within 200 feet of Highway 18 and the size of the buildings and parking area would be smaller under this alternative ensuring that they would be less visible from the highway. Accordingly, the impacts to visual resources at the Project site would be reduced compared to the less-than-significant impacts that would occur under the proposed Project. Similar to the proposed Project, this alternative would introduce new sources of light and glare but would still result in a less-than-significant impact.

B. Air Quality

Under this alternative, construction emissions would be reduced since the amount of grading would be reduced by 25% and the duration of construction activities would be reduced, compared to the proposed Project. As such, this alternative would result in a reduction in the less-than-significant construction emissions that would occur under the proposed Project.



Less than significant operational emissions identified for the proposed Project would be further reduced under this alternative, due to the reduction in building area and fewer vehicle trips. Therefore, construction and operation air quality impacts associated with the Reduced Project/Alternative Site Design Alternative would be less than identified for the proposed Project.

C. Biological Resources

Under this alternative, development of the site would be limited to 20.34-acres and would reduce the amount of disturbance of vegetation within an approximately 200-foot setback along Highway 18. Therefore, this alternative would reduce impacts on jurisdictional waters, southern rubber boa habitat, and the San Bernardino flying squirrel that were identified for the proposed Project. Although disturbance of these habitats would be reduced or avoided, compared to the proposed Project, the loss of habitat would still be considered a cumulatively considerable significant unavoidable impact. Overall impacts on biological resources would be less under this alternative than identified for the proposed Project.

D. Geology and Soils

This alternative would reduce the overall grading and disturbance of the site and reduce the number of people and structures exposed to potential geologic hazards compared to the proposed Project. Grading within an approximately 200 foot setback along Highway 18 would be limited to the construction of the entry and emergency access roads. As such, this alternative would avoid a potentially significant impact associated with development within the small landslide area that would occur under the proposed Project. This alternative would further reduce the less-than-significant geology and soils impacts associated with seismicity, liquefaction, settlement, soil expansiveness, and soil erosion that were identified for the proposed Project.

E. Hazards and Hazardous Materials

This alternative would reduce demand on fire protection services and water systems due to the reduced size of the larger buildings and intensity of development on the Project site. However, like the proposed Project, this alternative could potentially expose people and structures to wildland fire hazards. Similar to the proposed Project, these impacts would be less than significant with adherence to standard and non-standard conditions of approval imposed by the SBCFD.

F. Hydrology, Water Quality, and Water Supply

Under this alternative, potential impacts on hydrology and drainage, water supply, and water quality would be reduced compared to the proposed Project. Erosion, surface water runoff, and water quality impacts from construction and operation would be reduced due to the reduction in the area of site disturbance and corresponding decrease in the amount of impervious surface. Due to the reduced building area and congregation water demand would also be reduced compared to the proposed Project. Similar to the proposed Project, compliance with regulatory requirements would ensure that impacts on water quality would be less than significant. Overall, impacts associated with hydrology would be less than significant and less than the proposed Project.



G. Land Use

Under this alternative the site would be developed with the same type of use as the proposed Project and therefore would require a Conditional Use Permit. This alternative would develop 20.34-acres of the site compared to 27.12-acres under the proposed Project. This alternative would reduce overall development of the larger buildings by approximately 25% for a total building area of 51,301-square feet compared to 68,40-square feet under the proposed Project. This alternative would also reduce the grading and clearance of vegetation within an approximately 200-foot setback along Highway 18 and also provide a greater separation between the sports field and residential uses to the west. The reduced area of development would generally result in a lower generation of vehicular trips which would be likely to decrease the severity of a potential conflict with General Plan and Lake Arrowhead Community Plan policies related to levels of service within the Project study area roadways. Therefore, while the implementation of this alternative could still result in significant and unavoidable impacts associated with a conflict with the General Plan and Lake Arrowhead Community Plan policies, this alternative would result in less land use impacts than identified for the proposed Project.

H. Noise

Under this alternative, construction noise impacts would be reduced compared to the proposed Project because 25% less grading would be required, the overall duration of construction would be reduced, and grading and clearance within 200-feet along Highway 18 would be limited to construction of the entry and emergency access roads. In addition, due to the reconfiguration of the site, construction activities associated with the sports field would be further away from residential uses to the west. However, although somewhat reduced, construction impacts associated with this alternative are likely to remain significant and unavoidable, similar to the proposed Project.

Long-term operational noise impacts to residential areas to the west would be less than those identified for the proposed Project, due to the reduction in Project size and the location of the sports field further away from residential uses to the west. As with the proposed Project, roadway noise along Highway 18 would increase under this alternative. However, because this alternative would generate 25% fewer vehicle trips, noise impacts from roadway noise be reduced compared to the less than significant operational noise levels along study area roadways that would occur under the proposed Project.

I. Transportation and Circulation

The implementation of this alternative would reduce the congregation by 25%, which would result in a corresponding reduction in the number of vehicular trips that would be generated by the proposed Project. Accordingly, the reduction in the vehicular trips generated by this alternative would result in an incremental reduction in the significant and unavoidable direct and cumulatively considerable impacts to roadway facilities in the Project study area that are under the jurisdiction of Caltrans. Although this incremental reduction in vehicular trips would reduce the severity of direct and cumulatively considerable impacts to roadway facilities resulting in an overall reduction in the traffic impacts, the implementation of this alternative would still result direct and cumulatively considerable traffic impacts.



J. Global Climate Change

Under this alternative, construction emissions that generate greenhouse gas emissions would be reduced due to the reduction in the duration and area of construction activity. Accordingly, this alternative would result in a reduction in the less-than-significant levels of greenhouse gas emissions that would occur under the proposed Project.

Operation-related greenhouse gas emissions would be reduced compared to the proposed Project due to the overall reduction in the number of vehicle trips and building area that would occur under this alternative. Similar to the proposed Project, this impact would be less than significant. Overall, impacts associated with global climate change would be reduced compared to the proposed Project.

4.3.3 CONCLUSION AND RELATIONSHIP OF THE ALTERNATIVE TO PROJECT OBJECTIVES

The Reduced Project/Alternative Site Design Alternative would reduce the less-than-significant impacts related to aesthetics, air quality, land use, operational noise, global climate change, hydrology, and hazards and hazardous materials compared to the proposed Project. This alternative would also incrementally reduce the severity of the significant and unavoidable impacts associated with construction noise, habitat for sensitive species and operational traffic. Although this alternative would result in reduced construction noise, direct and cumulatively considerable traffic impacts, and cumulative impacts on the southern rubber boa, California spotted owl, and San Bernardino flying squirrel, these impacts could potentially remain significant and unavoidable.

Even though this alternative would eliminate or reduce the severity of some significant and unavoidable impacts associated with the proposed Project, this alternative would not fulfill the Project objectives to the same degree as the proposed Project. Specifically, the Reduced Project/Alternative Site Design Alternative may not be able to fully accommodate present and future congregational needs for worship services and other related programs and activities, which may result in the need to lease or build additional facilities elsewhere. A comparative summary of the environmental impacts associated with the Reduced Project/Alternative Site Design Alternative with the environmental impacts anticipated under the proposed Project is provided in Table 4-1 on page 4-15.

4.4 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Section 15126.6(e)(2) of the CEQA Guidelines indicates that an analysis of alternatives to the proposed Project shall identify one alternative to the Project as the environmentally superior alternative.

Table 4-1 on page 4-15 provides a summary of impacts associated with the proposed Project compared to the three Project alternatives. The second item (in parenthesis) indicates whether the impact that would occur under the respective alternative would be considered significant after mitigation. The No Project Alternative under the primary assumption that the Project site would not be developed, would involve no change to the environment and is, therefore, considered environmentally superior overall. However, this alternative would not meet the objectives of the proposed Project.



Section 15126.6(e)(2) of the CEQA Guidelines also states that if the environmentally superior alternative is the No Project Alternative, the EIR shall also identify the environmentally superior alternative from among the other alternatives.

As such, the Reduced Project Alternative would be the environmentally superior alternative. This alternative would reduce overall physical environmental impacts to a greater extent than the No Project/No Build Alternative, the No Project/Feasible Development Alternative and the proposed Project.



Table 4-1 Comparison of Alternatives and Proposed Project

Issue	Proposed Project	No Project/No Build Alternative	No Project/Feasible Development Alternative	Reduced Project Alternative
Aesthetics	Less than Significant	Reduced	Greater	Reduced
Air Quality	Less than Significant	Reduced	Reduced	Reduced
Biological Resources	Cumulatively Significant Unavoidable	Reduced	Reduced	Reduced
Geology and Soils	Less than Significant with Mitigation	Reduced	Reduced	Reduced
Hazards	Less than Significant	Reduced	Similar	Reduced
Hydrology, Water Quality, and Water Supply	Less than Significant with Mitigation	Reduced	Reduced	Reduced
Land Use	Less than Significant	Reduced	Reduced	Reduced
Noise	Significant Unavoidable	Reduced	Reduced	Reduced
Transportation and Circulation	Significant Unavoidable	Reduced	Reduced	Reduced
Global Climate Change	Less than Significant	Reduced	Reduced	Reduced

Note: The impacts associated with the three project alternatives described in the respective columns is in comparison to the proposed Project.



5.0 OTHER CEQA CONSIDERATIONS

5.1 SIGNIFICANT UNAVOIDABLE IMPACTS

CEQA Guidelines Section 15126.2(b) requires that an EIR describe significant environmental impacts that cannot be avoided, including those effects that can be mitigated but not reduced to a less-than-significant level. Following is a summary of the impacts that were concluded to be significant and unavoidable. These impacts are also described in detail in Chapter 2.1, *Environmental Setting*, of this Draft Revised EIR.

5.1.1 BIOLOGICAL RESOURCES

The Project would result in the removal of low to moderate quality habitat for the southern rubber boa, San Bernardino flying squirrel, and California spotted owl. These three species are categorized as special-status. Therefore, the Project would have a substantial adverse effect species identified as special status by the California Department of Fish and Game or US Fish and Wildlife. At the Project level, impacts to the southern rubber boa, San Bernardino flying squirrel, and California spotted owl would be mitigated to a level below significance; however, at the regional level, impacts would remain cumulatively significant and unavoidable.

5.1.2 NOISE

Short-term construction noise has the potential to generate excessive noise level that have the potential to affect nearby sensitive receptors. The Project would comply with restrictions on days and hours of construction activities specified in Section 83.01.080(g)(3) to limit the exposure of sensitive land uses in the Project area to construction activities. The incorporation of mitigation measures would further limit the exposure of sensitive receptors to excessive noise levels; however, the mitigation would not reduce the peak construction noise levels to a level that would be below the significance threshold. Therefore, the Project's temporary impacts to sensitive receptors during construction would be significant and unavoidable.

5.1.3 TRANSPORTATION AND CIRCULATION

The Project would result in a significant direct impact to Intersection #18 and Intersection #4 under the Existing Plus Project scenario. Under the Opening Year (2018) scenario, the Project would result in a cumulatively considerable impact at Intersection #18 – Pine Avenue/State Route 18. Under the Cumulative (2018) scenario, the Project would result in cumulatively considerable impacts at Intersection #8 – Daley Canyon Road/State Route 189, Intersection #10 – Daley Canyon Road/State Route 18, and Intersection #18 – Pine Avenue/State Route 18. Under the Year 2040 scenario, the Project would result in cumulatively considerable impacts at Intersection #8 – Daley Canyon Road/State Route 18, Intersection #10 – Daley Canyon Road/State Route 18, and Intersection #11 – Daley Canyon Access Road/State Route 18. However, each of the impacted facilities are under the Jurisdiction of Caltrans. As such, San Bernardino County cannot assure the construction of improvements to State Highway facilities that may be needed to improve traffic flows at the impacted intersections. Furthermore, Caltrans does not have a funding mechanism in place to allow development projects to contribute a fair-share payment to contribute to future improvements and off-set cumulatively considerable traffic impacts. Although mitigation measures were identified that would require the Project Applicant to make fair share fee contributions to Caltrans to fund improvements to State Highway facilities in the Project study area (in the event that Caltrans establishes a fair share funding program that is applicable to the Project), there is no assurance that planned improvements would be in place prior to the time that the



Project beings to contribute traffic to the affected facilities. Accordingly, under the Opening Year (2018) scenario, the Project's direct and cumulatively considerable impacts to the State Highway facilities would be significant and unavoidable.

5.2 REASONS WHY THE PROJECT IS BEING PROPOSED, NOTWITHSTANDING SIGNIFICANT UNAVOIDABLE IMPACTS

In addition to identification of the Project's significant unavoidable impacts, CEQA Guidelines Section 15126.2(b) also requires that the reasons why the Project is being proposed, notwithstanding these impacts, be described. The reasons why this particular Project has been proposed are grounded in a comprehensive listing of Project objectives included in Chapter 2.0, *Project Description*, of this Draft DREIR. In general, the objectives of the proposed Project are to expand the existing Church of the Woods facilities to relieve space constraints; meet present and anticipated congregational needs for worship services, bible study, social gatherings, and recreational activities; provide meeting, and recreational facilities for local public and private organizations; retain 49.9% of the site as natural open space; and incorporate energy reduction, sustainable building practices, and water conservation into Project design and operation.

5.3 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

CEQA Guidelines Section 15126.2(c) indicates that “[u]ses 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.”

The Project would necessarily consume limited, slowly renewable, and non-renewable resources. This consumption would occur during the construction phase of the Project and would continue throughout its operational lifetime. The proposed development would require a commitment of resources that would include: (1) building materials; (2) fuel and operational materials/resources; and (3) the transportation of goods and people to and from the Project site. Construction of the Project would require the consumption of resources that are not replenishable or which may renew so slowly as to be considered non-renewable. These resources would include the following construction supplies: certain types of lumber and other forest products; aggregate materials used in concrete and asphalt such as sand, gravel, and stone; metals such as steel, copper, and lead; petrochemical construction materials such as plastics; and water. Fossil fuels, such as gasoline and oil, would also be consumed in the use of construction vehicles and equipment.

The resources that would be committed during operation of the Project would be similar to those currently consumed within the County of San Bernardino and in the mountain communities. These would include energy resources, such as electricity and natural gas, petroleum-based fuels required for vehicle-trips, fossil fuels, and water. Fossil fuels would represent the primary energy source associated with both construction and operation of the Project, and the existing, finite supplies of these natural resources would be incrementally reduced. It is noted here that increased consumption generated by the Project is not significant when compared with



existing energy consumption levels county-wide. As described in Subsection 3.J, *Greenhouse Gas Emissions*, operation of the Project would exceed Title 24 energy conservation requirements by 10%. In addition, the Project would be subject to energy efficient planning and construction guidelines as set forth by the County of San Bernardino. However, the energy requirements associated with the Project would, nonetheless, represent a long-term commitment of essentially non-renewable resources.

Development of the Project represents an essentially irreversible commitment of the land to a particular use that would transform an undeveloped forested land to a church facility. However, such a commitment would be justified, as places of worship are allowed to be considered in any Land Use Zoning District and are permitted uses within the Lake Arrowhead/Community Industrial (LA/IC) District designation of the Project site by Conditional Use Permit pursuant to the County Development Code.

In summary, construction and operation of the Project would result in the irretrievable commitment of limited, slowly renewable, and nonrenewable resources, which would limit the availability of these particular resource quantities for future generations or for other uses during the life of the Project. However, continued use of such resources would be of a relatively small scale and would be consistent with regional and local growth forecasts in the area. As such, although irreversible environmental changes would result from the Project, such changes would not be considered significant.

5.4 GROWTH-INDUCING IMPACTS

CEQA Guidelines Section 15126.2(d) requires that growth-inducing impacts of a proposed Project be considered. Growth-inducing impacts are characteristics of a project that could directly or indirectly foster economic or population growth or the construction of additional housing in the area or region. According to the CEQA Guidelines, growth-inducing impacts can include impacts associated with the removal of obstacles to growth as well as the development of facilities that encourage and facilitate growth.

The proposed Project would expand the existing Church of the Woods facilities to meet present and anticipated congregational needs for worship services, bible study, social gatherings, and recreational activities. The proposed Project would accommodate the Church of the Woods programs, which would take place throughout the week. The proposed facilities would also support the activities of the community by providing meeting, and recreational facilities for local public and private organizations. The proposed Project would not result in economic or population growth in the Rim Forest area as the facilities are intended to serve existing residents of the area. While the Project may also accommodate new congregants that move into the area over time, the Project itself is not expected to draw new residents to the mountain area. Overall, no significant growth-inducing impacts would occur as a result of this Project.

5.5 POTENTIAL SECONDARY EFFECTS

CEQA Guidelines Section 15126.4(a)(1)(D) requires that, “If a mitigation measure would cause one or more significant effects in addition to those that would be caused by the Project as proposed, the effects of the mitigation measure shall be discussed but, in less detail, than the significant effects of the Project as proposed.” With regard to this section of the CEQA Guidelines, the potential impacts that could result with the implementation of each mitigation measure proposed for the Project were reviewed. The following provides



a discussion of the potential secondary impacts that could occur as a result of the implementation of the measures by environmental issue area.

5.5.1 BIOLOGICAL RESOURCES (SEE SUBSECTION 3.C OF THIS DREIR)

No significant secondary impacts would result from the implementation of the mitigation measures identified in Subsection 3.C of the DEIR. Implementation of these measures involves pre-construction wildlife surveys, permanent on-site conservation of sensitive habitat, and obtaining required permits for potential impacts to an on-site drainage feature, which are not expected to result in significant secondary environmental impacts.

5.5.2 GEOLOGY AND SOILS (SEE SUBSECTION 3.D OF THIS DREIR)

No significant secondary impacts would result from the implementation of the mitigation measures identified in Subsection 3.D of the DREIR. The mitigation measures would require the preparation of a design-level geotechnical investigation report and incorporating the recommendations therein for the proposed Project and to ensure stability of a small landslide area and lateral spreading. Any secondary impact associated with excavation and stabilization of the landslide area is not expected to be adverse, since these would be in accordance with the site-specific recommendations of the design-level report. Therefore, these mitigation measures would not result in secondary impacts.

5.5.3 HYDROLOGY, WATER QUALITY, AND WATER SUPPLY (SEE SUBSECTION 3.F OF THIS DREIR)

No significant secondary impacts would result from the implementation of the mitigation measures identified in Subsection 3.F of the DEIR. The mitigation measures would require the preparation of a design-level geotechnical investigation report and incorporating the recommendations therein for the proposed Project and to ensure stability of a small landslide area and lateral spreading. Any secondary impact associated with excavation and stabilization of the landslide area is not expected to be adverse, since these would be in accordance with the site-specific recommendations of the design-level report. Therefore, these mitigation measures would not result in secondary impacts.

5.5.4 NOISE (SEE SUBSECTION 3.H OF THIS DREIR)

No significant secondary impacts would result from the implementation of the mitigation measure identified in Subsection 3.H of the DEIR. The mitigation measure relates to the location of stationary equipment and equipment staging areas, the construction schedule, and location of construction activities in order to reduce noise impacts resulting from the construction of the Project. These measures would not result in physical changes to the environment and, as such, would not result in secondary impacts.

5.5.5 TRANSPORTATION AND CIRCULATION (SEE SUBSECTION 3.I OF THIS DREIR)

No significant secondary impacts would result from the implementation of the mitigation measures identified in Subsection 3.I of the DEIR, which would require the installation of two traffic signals and the payment of fees towards improvements at other impacted intersections. The physical improvements that would result from the construction of these facilities are limited to the installation of traffic signals, which would be expected to occur within previously disturbed right-of-way.



5.6 CONCLUSION

In conclusion, each of the mitigation measures contained in the Draft Revised EIR has been considered to determine if significant secondary effects would result from the implementation of the measures. As indicated above, implementation of the proposed mitigation measures would not result in any significant secondary environmental effects.

5.7 EFFECTS NOT FOUND TO BE SIGNIFICANT

In accordance with CEQA Guidelines Section 15128, an EIR shall contain a statement briefly indicating the reasons that certain effects of the Project were determined not to be significant and were therefore not discussed in detail in the DREIR. The Initial Study that was prepared for the Project, which is included as *Technical Appendix A* of this DREIR, contains a detailed discussion of the potential environmental impact areas and the reasons that each topical area was or was not analyzed further in the DREIR. The potential environmental areas for which effects were not found to be significant include the following:

- Agricultural Resources;
- Cultural Resources;
- Mineral Resources;
- Population and Housing;
- Recreation;
- Tribal Cultural Resources; and
- Utilities and Service Systems (with the exception of Water Usage, which is addressed in Subsection 3.F, *Hydrology and Water Quality*).



6.0 REFERENCES

6.1 DOCUMENTS APPENDED TO THIS DREIR

The following reports, studies, and supporting documentation were used in preparing the Church of the Woods Draft Revised EIR and are bound separately as Technical Appendices. A copy of the Technical Appendices is available for review at the County of San Bernardino Land Use Services Department, located at 385 North Arrowhead Avenue, San Bernardino, CA 92415.

- Appendix A Notice of Preparation and Initial Study, Notice of Preparation Comments, Previous Staff Report, and Additional Comments
- Appendix B Air Quality and Greenhouse Gas Analysis
- Appendix C Habitat Assessment
- Appendix D1 Geotechnical Update Report
- Appendix D2 Earthwork Analysis Report
- Appendix E1 Evacuation Plan
- Appendix E2 Fuel Modification Plan
- Appendix F Drainage Study and Additional Water Supply Information
- Appendix G Noise and Vibration Impact Assessment
- Appendix H Traffic Impact Analysis and Supplemental Correspondence

DOCUMENTS INCORPORATED BY REFERENCE

The following reports, studies, and supporting documentation were used in the preparation of this DREIR and are incorporated by reference within this DREIR. A copy of the following reports, studies, and supporting documentation is a matter of public record and is generally available to the public at the location listed below and also are available for review at the County of San Bernardino Land Use Services Department, located at 385 North Arrowhead Avenue, San Bernardino, CA 92415..

Blaney, Megan, Public Information Officer, Office of Emergency Services, telephone conversation, June 23, 2009.

California Environmental Quality Act (CEQA), Public Resources Code Section 21000 et seq.

Center for Biological Diversity, San Bernardino Valley Audubon Society, Save Our Forest Association, Sierra Club Mountains Group of the San Gorgonio Chapter, Appeal of the Mitigated Negative Declaration for the Church of the Woods Tentative Parcel Map 16155 and Conditional Use Permit APN 0336-101-06, 07, May 28, 2004.



Crestline-Lake Arrowhead Water Agency, 2010 Urban Water Management Plan, August 2011.

Dibblee, T.W., Jr. Geologic Map of the Redlands quadrangle: USGS Open file map 74-26, 1968.

Lahontan Regional Water Quality Control Board, Water Quality Control Plan, March 1995 as amended.
Available:

http://www.waterboards.ca.gov/lahontan/water_issues/programs/basin_plan/docs/print_version.pdf.

San Bernardino County Code, Title 6, Division 3, Building Regulations.

http://sbcounty-ca.elaws.us/code/coor_t6

San Bernardino County Development Code, Adopted March 13, 2007.

<http://www.sbcounty.gov/Uploads/lus/DevelopmentCode/DCWebsite.pdf>

San Bernardino County Development Code, Chapter 82.13, Fire Safety (FS) Overlay.

San Bernardino County Development Code, Chapter 82.15, Geologic Hazard (GH) Overlay.

San Bernardino County Development Code, Chapter 82.19, Open Space Overlay.

San Bernardino County Development Code, Chapter 83.07, Glare and Outdoor Lighting.

San Bernardino County Development Code, Chapter 83.10, Landscaping Standards.

San Bernardino County Development Code, Chapter 83.13, Sign Regulations.

San Bernardino County Development Code, Chapter 85.06, Conditional Use Permit/Minor Use Permit.

San Bernardino County Development Code, Chapter 88.01, Plant Protection and Managements.

San Bernardino County Development Code, Section 82.13.080, Soil Erosion and Sediment Control Plan/Permits.

San Bernardino County Development Code, Section 81.01.090, Effect of General Plan Adoption or Development Code Changes on Projects in Progress.

San Bernardino County Development Code, Section 83.01.080, Noise.

San Bernardino County Development Code, Section 83.01.090, Vibration.

San Bernardino County, Draft Goals and Policies Report, September 2005.

San Bernardino County General Plan, Adopted March 13, 2007a.
(<http://www.sbcounty.gov/Uploads/lus/GeneralPlan/FINALGP.pdf>).

San Bernardino County General Plan Program Final EIR, February 2007b.
(<http://www.sbcounty.gov/Uploads/lus/GeneralPlan/FinalEIR2007.pdf>)



San Bernardino County General Plan, Lake Arrowhead Community Plan, adopted March 13, 2007c.
(<http://www.sbcounty.gov/Uploads/lus/CommunityPlans/LakeArrowheadCP.pdf>)

San Bernardino County Land Use Plan, General Plan, Open Space Overlay Map, 2007d.
(<http://cms.sbcounty.gov/Portals/5/Planning/ZoningOverlaymaps/OpenSpaceCountywide.pdf>)

San Bernardino County General Plan, Fire Safety Overlay Map.
(http://www.sbcounty.gov/Uploads/lus/HazMaps/FH23B_20100309.pdf) .

San Bernardino County General Plan, Geologic Hazards Overlay Map.
(http://www.sbcounty.gov/Uploads/lus/GeoHazMaps/FH23C_20100309.pdf).

San Bernardino County General Plan, Hazard Overlay Map.
(http://www.sbcounty.gov/Uploads/lus/HazMaps/FH23B_20100309.pdf) .

San Bernardino County, Land Use Services Department, Notice of Preparation of Environmental Impact Report Impact Report for the Church of the Woods Project, February 10, 2005.
(<http://www.sbcounty.gov/Uploads/lus/Mountain/ChurchoftheWoods/NOPChurchofWoods.pdf>)

Santa Ana Regional Water Quality Control Board, Water Quality Control Plan, adopted in January 1995, updated in February 2008 and June 2011. Available:
(http://waterboards.ca.gov/santaana/water_issues/programs/basin_plan/).

State CEQA Guidelines, 14 California Code of Regulations [CCR], Section 15000 et seq.

6.2 DOCUMENTS AND WEBSITES CONSULTED

California Air Resources Board, ARB's Facility Search for Emissions Inventory of Air Toxics.
(<http://www.arb.ca.gov/app/emsinv/facinfo/facinfo.php>).

California Air Resources Board, California 1990 Greenhouse Gas Emissions Level and 2020 Limit.
(<https://www.arb.ca.gov/cc/inventory/1990level/1990level.htm>)

California Air Resources Board, Climate Change Scoping Plan, November 2017.
(https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf)

California Department of Fish and Wildlife, California Natural Diversity Database, Biogeographic Data Branch, Special Animals, August 2018.
(<https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109406&inline>)

California Department of Fish and Wildlife, California Natural Diversity Database, Special Vascular Plants, Bryophytes, and Lichens List, August 2018.
(<https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline>)

California Department of Forestry and Fire Protection, Blue Cut Fire Incident Information.
(http://cdfdata.fire.ca.gov/incidents/incidents_details_info?incident_id=1391)



- California Department of Forestry and Fire Protection, Grass Valley Fire Incident Information, 2008 (http://cdfdata.fire.ca.gov/incidents/incidents_details_info?incident_id=236).
- California Department of Forestry and Fire Protection, correspondence dated September 13, 2013.
- California Department of Forestry and Fire Protection, Slide Fire Incident Information. (http://cdfdata.fire.ca.gov/incidents/incidents_details_info?incident_id=235)
- California Geologic Survey, Special Publications 117a, Guidelines for Evaluating and Mitigating Seismic Hazards in California, 2008. (https://www.conservation.ca.gov/cgs/Documents/Publications/SP_117a.pdf)
- Crestline-Lake Arrowhead Water Agency, Water Service to Church of the Woods, correspondence dated April 28, 2017.
- Curtis, Tom, Fire Engineer Paramedic, Crest Forest Fire Protection District, correspondence dated July 21, 2009.
- ELMT Consulting (ELMT), Special-Status Plant Survey Report for the Church of the Woods Project Located in San Bernardino County, California, December 2018.
- Fahrig, Lenore and Merriam, Gray, Habitat Patch Connectivity and Popular Survival, December 1985.
- Hanson, D.L. Fisk, L.H., Rasmussen, G.S., and Redder, W.A. Preliminary Assessment of Landsliding at Rimforest San Bernardino Mountains, southern California; in Sadler, P.M., and Morton, D.M., editors: Landslides in a semi-arid environment, Volume 2 publication of the Inland Geological Society, 1989.
- Hart, E.W. and Bryant, W.A. Fault-rupture hazard zones in California, California Dept. of Conservation Division of Mines and Geology Special Publication 42, 1994.
- Harris, L. D. and Gallagher, P. B., New initiatives for wildlife conservation: the need for movement corridors, 1989.
- Hatcher, John and Bridges, James, Foresters Report for Church of the Woods Lake Arrowhead Christian School, March 2003.
- Hatcher, John B., Updated Foresters Report, September 7, 2005.
- Holmes, Roxanne M., General Manager, Crestline-Lake Arrowhead Water Agency, correspondence dated March 3, 2010.
- IPCC, Regional Climate Projections. In: Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, 2007. (<https://www.ipcc.ch/report/ar4/wg1/>)



- Kostka, Stephen L., Zischke, Michael H. Practice Under the California Environmental Quality Act, Continuing Education of the Bar, January 2002.
- Lehmkuhl, John F., Kistler, Keith D., Begley James S., and Boulanger, John 2006. Demography of Northern Flying Squirrels Informs Ecosystem Management of Western Interior Forests. Ecological Applications 16 (2) 584-600.
- Lippert, Marc, Water Operations Supervisor, Lake Arrowhead Community Services District, telephone conversation, May 30, 2017.
- Losekoot, Frank, County Forester, San Bernardino County Fire Department, correspondence dated January 17, 2008.
- MacArthur, Robert H., Wilson, Edward O., The Theory of Island Biogeography, 1967.
- Maxwell, Christopher R., A Watershed Management Approach to Assessment of Water Quality and Development of Revised Water Quality Standards for the Ground Waters of the Mojave River Floodplain, 2000.
(https://acwi.gov/monitoring/nwqmc.org/2000proceeding/papers/pap_maxwell.pdf)
- Mountain Area Safety Task Force, Mountain Area Emergency Routes, July 2003.
(<http://www.sbcounty.gov/calmast/pdf/EmergRoutes1.pdf>)
- National Scenic Byways Program, Rim of the World Scenic Byway.
(<http://www.byways.org/explore/byways/2595/designation.html>).
- NBC News, Blue Cut Fire Burns 25,000 Acres, Forces 82,000 to Evacuate in California, August 17, 2016.
(<https://www.nbcnews.com/storyline/western-wildfires/blue-cut-fire-burns-18-000-acres-forces-82-000-n632486>)
- Noss, Reed, A Regional Landscape Approach to Maintain Diversity, December 1983.
(https://www.researchgate.net/publication/201999783_A_Regional_Landscape_Approach_to_Maintain_Diversity)
- Parmelee, Dick, Fire Chief for Crest Forest Fire Protection District, Standard Fire Conditions – Department File No. 04PC00000016, Dated March 15, 2005.
- Parmelee, Dick, Fire Marshal, Crest Forest Fire Protection District, correspondence dated March 15, 2005.
- Regional Water Quality Control Board, Santa Ana Regional Water Control Board Water Quality Control Plan, updated February 2016
(https://www.waterboards.ca.gov/santaana/water_issues/programs/basin_plan/)
- San Bernardino County Official Land Use Plan, General Plan Biotic Resource Overlay.
(http://www.sbcounty.gov/Uploads/lus/BioMaps/vly_mtn_all_biotic_resources_map_final.pdf).
- San Bernardino County, Multi-Jurisdictional Hazard Mitigation Plan, June 13, 2017.
(http://cms.sbcounty.gov/portals/58/Documents/Emergency_Services/Hazard-Mitigation-Plan.pdf)



SCAQMD, CEQA Air Quality Handbook, November 1993.

(<http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook>)

SCAQMD, Final 2016 Air Quality Management Plan.

(<https://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/final-2016-aqmp>)

SCAQMD, Rule 403, amended June 3, 2005.

(<http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-403.pdf>)

Simberloff, Daniel and Cox, James, Consequences and Costs of Conservation Corridors, May 1987.

(<https://onlinelibrary.wiley.com/doi/pdf/10.1111/j.1523-1739.1987.tb00010.x>)

Soule, Michael E., Diversity, August 1987.

Tan, S. S. Landslide hazards in the Lake Arrowhead and Big Bear Lake Region, San Bernardino County, California: California Division of Mines and Geology, Open File Report 89-7, 1989.

Technical Noise Supplement, TeNS, A Technical Supplement to the Traffic Noise Analysis Protocol, California Department of Transportation, October 1998, pp. N-192.

U.S. Department of Agriculture. Forest Service, Pacific Southwest Region. Revised Land Management Plans and Final Environmental Impact Statement, 2005.

(https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5166889.pdf)

U.S. Department of Agriculture, Forest Service, Pacific Southwest Region, Land Management Plan, Part 2 San Bernardino National Forest Strategy, September 2005.

(https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fsbdev7_007719.pdf)

U.S. Environmental Protection Agency, Environmental Mapper of Potential Superfund Sites, Hazardous Waste, Toxic Release, and Air Emissions. (<https://www.epa.gov/superfund/search-superfund-sites-where-you-live>).

Water Agencies' Standards, Design Guidelines for Water and Sewer Facilities, 2014.

(http://www.sdwas.org/Portals/0/Documents/Downloads/DesignGuidelines_Complete.pdf)

Water Resources Control Board, Strategic Plan Update: 2010.

(https://www.waterboards.ca.gov/water_issues/hot_topics/strategic_plan/2007update.html)



7.0 ORGANIZATIONS/PERSONS CONSULTED AND LIST OF PREPARERS

7.1 AGENCIES AND ORGANIZATIONS

Local Agencies

Crestline-Lake Arrowhead Water District

24116 Crest Forest Dr.
Crestline, CA 92325

Roxanne Holmes, General Manager

San Bernardino County Fire Department

157 West Fifth Street, 2nd Floor
San Bernardino, CA 92415

Mark A. Hartwig, Fire Chief
Don Trapp, Deputy Fire Chief
John Chamberlin, Deputy Chief of Administration

San Bernardino County

Office of Emergency Services
1743 Miro Way
Rialto, CA 92376

Michael Antonucci, Emergency Services Manager

7.2 REPORT PREPARATION PERSONNEL

Lead Agency

County of San Bernardino

Land Use Services Department
County Government Center
385 North Arrowhead Avenue
San Bernardino, CA 92415-0182

Terri Rahhal, Director
Heidi Duron, Planning Director
Tom Nieves, Planner



EIR Consultant

T&B Planning, Inc.

17542 East 17th Street, Suite 100
Tustin, CA 92780

Tracy Zinn, AICP, President
Shawn Nevill, Senior Project Manager
Ryan Kelleher, Project Manager
Christhida Mroska, Staff Planner/Environmental Analyst
Eric Horowitz, GIS Manager
Cristina Maxey, GIS/Graphics Specialist
Steven Lusk, GIS/Graphics Specialist

HDR (Air Quality/Greenhouse Gas/Noise)

3230 El Camino Real, Suite 200
Irvine, CA 92602

Keith Lay

Element Consulting (Biology)

2201 N. Grand Avenue, #10098
Santa Ana, CA 92711

Thomas J. McGill, Ph.D

LOR Geotechnical Group (Geotechnical)

6121 Quail Valley Court
Riverside, CA 92507

John P. Leuer, President

W. J. McKeever, Inc. (Wastewater/Drainage)

647 North Main Street, Suite 2A
Riverside, CA 92501

Bill McKeever, President

Focus 360 (Photo simulations)

27721 La Paz Road, Suite B
Laguna Niguel, CA 92677

Steve Ormode, Principal



Translutions, Inc.

17632 Irvine Boulevard, Suite 200
Tustin, CA 92780

Environmental Consultant (Evacuation/Fuel Modification Plan)

Timothy E. Paysen, Ph.D.

Project Applicant

Church of the Woods

1410 Calgary Drive
Lake Arrowhead, CA 92352

Patrick Hopkins

Project Applicant's Consultants

ICON General Contractors

1814 Commercenter West, Suite A
San Bernardino, CA 92408

Patrick Hopkins, President