SIERRA MADRE GENERAL PLAN UPDATE
DRAFT SEIR

August 2021 | Draft Environmental Impact Report

State Clearing House No. 2021040369

TABLE OF CONTENTS

I. INTRODUCTION I-1

1. Introduction I-1
2. SEIR Purpose, Intent, and Legal Authority I-1
3. Lead, Responsible, and Trustee Agengies I-1
4. Type of EIR I-2
5. Environmental Review Process I-2
6. SEIR Background I-4
7. SEIR Scope and Content I-5

II. EXECUTIVE SUMMARY II-1

1. Introduction II-1
2. Project Summary II-1
3. Project Objectives II-1
4. Areas of Controversy II-2
5. New Alternatives Not Considered II-2
6. Environmental Impacts and Mitigation Measures II-2

III. PROJECT DESCRIPTION III-1

1. Project Location III-1
2. Project Characteristics III-1
   - A. Current General Plan III-1
   - B. Description of the Project III-2
3. General Plan Policies III-13
4. Project Objectives III-22
5. Requested Actions III-22

IV. ENVIRONMENTAL IMPACT ANALYSIS IV-1

- A. Aesthetics IV.A-1
- B. Air Quality IV.B-1
- C. Biological Resources IV.C-1
- D. Cultural Resources and Tribal Cultural Resources IV.D-1
- E. Geology and Soils IV.E-1
- F. Greenhouse Gas Emission IV.F1
- G. Land Use and Planning IV.G-1
- H. Noise IV.H-1

I. Population and Housing IV.I-1
J. Public Services IV.J-1
K. Transportation IV.K-1
L. Utilities and Service Systems IV.L-1
V. OTHER CEQA CONSIDERATIONS V-1
VI PREPARERS OF THE EIR VI-1
VII. REFERENCES VII-1

APPENDICES

Appendix A: NOP and NOP Comment Letters

Appendix B: Air Quality and Greenhouse Gas Emissions Report

Appendix C: Energy Report

Appendix D: Noise Report

Appendix E: Transportation Report

LIST OF FIGURES

Figure III-1, Regional Location and Project Vicinity Map III-3
Figure III-2, Housing Element Opportunity Sites Location Map III-10
Figure III-3, Existing General Plan Designations III-14
Figure III-4, Proposed General Plan Designations III-15
Figure III-5, Existing Zoning Designations III-16
Figure III-6, Proposed Zoning Designations III-17

LIST OF TABLES

Table II-1, Comparision of 2021 General Plan EIR SEIR and 2015 General Plan DEIR Impacts II-3
Table III-1, City of Sierra Madre Regional Housing Needs Allocation III-4
Table III-2, Potential Housing Units During 2021-2029 Planning Period III-5
Table III-3, Sites for Rezoning at 20-30 Units per Acre III-7
Table III-4, Religious Housing Overlay Zone Standards III-8
Table III-5, Religious Housing Overlay Zone Sites III-9
Table III-6, Proposed Housing Element General Plan Amendment and Rezone Sites III-11
Table IV.B-1, Summary of Health Effects of Criteria Pollutants IV.B-3
Table IV.B-2, Ambient Air Quality Standards IV.B-9
Table IV.B-3, Attainment Status for the South Coast Air Basin (Los Angeles County Portion) IV.B-16
Table IV.B-4, Summary of Ambient Air Quality in the Project Vicinity IV.B-17
Table IV.B-5, Regional Significance - Unmitigated Operational Emissions (lbs/day) IV.B-23
Table IV.C-1, Special Status Plant Species Known from the Project Region IV.C-6
Table IV.C-2, Special Status Animal Species from the Project Region IV.C-8
Table IV.D-1, Sierra Madre Designated Historical Landmarks IV.D-3
Table IV.E-1, Southern California Region Earthquakes with a Magnitude of 5.0 or Greater IV.E-5
Table IV.F-1, Description of Identified Greenhouse Gases IV.F-3
Table IV.F-2, Atmospheric Lifetimes and Global Warming Potentials IV.F-5
Table IV.F-3, Existing City of Sierra Madre GHG Emissions Inventory IV.F-6
Table IV.F-4, Total Electricity System Power (California 2019) IV.F-32
Table IV.F-5, SCE 2019 Power Content Mix IV.F-34
Table IV.F-6, Existing Year 2021 Greenhouse Gas Emissions IV.F-41
Table IV.F-7, Buildout Year 2029 Greenhouse Gas Emissions IV.F-42
Table IV.F-8, Consistency with CARB Scoping Plan Policies and Measures IV.F-44
Table IV.F-9, Consistency with EAP Policies and Measures IV.F-49
Table IV.F-10, Estimated Vehicle Operations Fuel Consumption IV.F-54
Table IV.F-11, Annual Operational Energy Demand Summary IV.F-56
Table IV.G-1, Sierra Madre Housing Needs for 2021-2029 Housing Element IV.G-7
Table IV.H-1, Decibel Scale and Common Noise Sources IV.H-3
Table IV.H-2, Construction Vibration Damage Criteria IV.H-10
Table IV.H-3, Groundborne Vibration and Groundborne Noise Impact Criteria for General Assessment IV.H-10
Table IV.H-4, Guidelines for Noise Compatible Land Use IV.H-12

Table IV.H-5, Guideline Vibration Damage Potential Threshold Criteria IV.H-13
Table IV.H-6, Short-Term Noise Level Measurements IV.H-17
Table IV.H-7, Long-Term Noise Level Measurements IV.H-17
Table IV.H-8, Existing Noise Contours IV.H-18
Table IV.H-9, Traffic Noise Increase without Project IV.H-22
Table IV.H-10, Traffic Noise Increase with Project IV.H-23
Table IV.I-1, Regional Population Growth Trends 1990-2020 ..... IV.I-3
Table IV.I-2, Regional HousingTrends IV.I-3
Table IV.I-3, Housing Units by Type IV.I-4
Table IV.I-4, City of Sierra Madre 2021–2029 Regional Housing Needs Assessment IV.I-5
Table IV.I-5, Sierra Madre Employment by Sector (2019) IV.I-6
Table IV.I-6, Adopted SCAG Growth Forecast (2016 to 2045) IV.I-7
Table IV.I-7, Project Comparison to SCAG Growth Forecast IV.I-16
Table IV.J.2-1 Total Crime Statistics for 2017-2018 ..... IV.J.2-3
Table IV.J.3-1 City of Sierra Madre School Enrollments for 2020-2021 ..... IV.J.3-2
Table IV.J.4-1 Sierra Madre Parks IV.J.4-2
Table IV.K-1, VMT Analysis Summary IV.K-16
Table IV.L.1-1, Historical Water Supplies IV.L.1-3
Table IV.L.1-2, Total Water Demands Projections Under the Project IV.L.1-18
Table IV.L.2-1, Projected Wastewater Generation Under the Project IV.L.2-7
Table IV.L.5-1, Estimated Daily Solid Waste Generation Under the Project IV.L.5-10

I. INTRODUCTION

1. INTRODUCTION

This document is a Subsequent Environmental Impact Report (SEIR) for the proposed City of Sierra Madre 2021-2029 Housing, Land Use, Safety, and Circulation Element General Plan Update (hereafter referred to as the proposed project or the project) in the City of Sierra Madre, California.

The project consists of a comprehensive update to the Housing Element and related updates to the Land Use Element and Land Use Map of the City of Sierra Madre General Plan. The project also includes updates to the City's Zoning Code, Zoning Map, and updates to the Safety Element and Circulation Element in compliance with new State rules. The proposed project is described in more detail in Section II, Project Description.

2. SEIR PURPOSE, INTENT, AND LEGAL AUTHORITY

The California Environmental Quality Act (CEQA) was enacted in 1970 with the objective to inform the public and decision makers of the potential environmental effects of a proposed project. CEQA applies to all discretionary projects proposed to be carried out or approved by California public agencies, including state, regional, county, and local agencies. The proposed project requires discretionary approval (i.e., development review permit) from the City of Sierra Madre (City) and, therefore, is subject to CEQA.

This subsequent environmental impact report (SEIR) analyzes the potential environmental impacts that may result from the implementation of the proposed project located in the City of Sierra Madre. The SEIR is intended as an informational document for public agencies, the general public, and City of Sierra Madre decision-makers regarding the significant environmental impacts that could result from the proposed project. The CEQA process was established to enable public agencies to evaluate a project in terms of its environmental consequences, to examine and implement mitigation measures for eliminating or reducing any potentially adverse impacts, and to consider alternatives to the project. While CEQA Section 150201(a) requires that major consideration be given to avoiding environmental damage, the Lead Agency and other responsible public agencies must consider the information in an EIR and balance adverse environmental effects against other public objectives, taking into account economic, legal, social, and technological factors.

3. LEAD, RESPONSIBLE, AND TRUSTEE AGENCIES

The State CEQA Guidelines (California Code of Regulations Section 15000 et seq) define lead, responsible, and trustee agencies. For purposes of CEQA compliance, the City of Sierra Madre is identified as the Lead Agency for this project. The Lead Agency is responsible for preparing this EIR in accordance with CEQA (Public Resources Code Section 21000 et seq) and the State CEQA Guidelines. As mandated by the CEQA Guidelines, the EIR reflects the Lead Agency's independent review and judgment and objectivity with regard to the scope, content, and adequacy of analysis.

A responsible agency refers to a public agency other than the lead agency that has discretionary approval over the project and a trustee agency refers to a state agency having jurisdiction by law over natural resources affected by a project. There are no responsible or trustee agencies for the proposed project.

4. TYPE OF EIR

The 2021-2029 Housing, Land Use, Safety, and Circulation Element General Plan Update SEIR is a Subsequent EIR. As defined in Section 15162 of the CEQA Guidelines, when an EIR has been certified for a project, a subsequent EIR shall be prepared where substantial changes are proposed in the project which require major revisions of the previous EIR; substantial changes occur with respect to the circumstances under which the project is undertaken requiring major revisions of the previous EIR; or new information of substantial importance, which was not known and could not have been known, at the time the previous EIR was certified as complete shows new or more severe environmental impacts.

The City of Sierra Madre 2021-2029 Housing Element City is an update to the 2014-2021 Housing Element. To accommodate required housing, the 2021-2029 Housing Element requires updates to the Land Use Element and Land Use Map of the City of Sierra Madre General Plan. The update also includes revisions to the City's Zoning Code, Zoning Map, and updates to the Safety Element and Circulation Element. To comply with SB 379, AB 2140, and SB 1241, the City needs to update their Safety Element. The City recently adopted Transportation Study Guidelines for Vehicle Miles Traveled in July 2020. These Guidelines need to be incorporated into the General Plan Circulation Element. Lastly, to comply with SB 100, the City must also adopt Environmental Justice Element policies.

The City prepared a comprehensive update to their General Plan in 2015 and a General Plan EIR, which was certified in 2015. This Subsequent EIR specifically considers whether the proposed project would result in new significant impacts not identified in the 2015 Sierra Madre General Plan Update DEIR. This Subsequent EIR also discusses any pertinent new information or changes in circumstances that could result in new significant impacts not identified in the 2015 Sierra Madre General Plan Update DEIR or a substantial increase in the severity of the previously identified significant impacts. Previously imposed mitigation measures from the Sierra Madre General Plan Update DEIR are identified and, where appropriate, are clarified, refined, revised, or deleted. This Subsequent EIR also identifies whether or not new mitigation measures are required.

5. ENVIRONMENTAL REVIEW PROCESS

In general, the environmental review process for an SEIR are as follows, presented in sequential order.

A. Notice of Preparation

After deciding that an EIR is required, the lead agency must file a Notice of Preparation (NOP) soliciting input on the EIR scope to the State Clearinghouse, other concerned agencies, and parties previously requesting notice in writing (CEQA Guidelines Section 15082; Public Resources Code Section 21092.2). Pursuant to Executive Order N-80-20, NOPs shall be posted for 30-days on the lead agency's website. The NOP may be accompanied by an Initial Study that identifies the issue areas for which the proposed project could create significant environmental impacts.

B. Draft Subsequent Environmental Impact Report

The Draft SEIR must contain the following:

- Table of contents or index
- Summary
- Project description
- Environmental setting

- Discussion of potentially significant impacts (direct, indirect, cumulative, growth-inducing and unavoidable impacts)
- Discussion of alternatives
- Mitigation measures

C. Notice of Completion/Notice of Availability of Draft SEIR

A lead agency must file a Notice of Completion (NOC) with the State Clearinghouse when it completes a Draft SEIR and prepare a public Notice of Availability (NOA) for the Draft EIR. Pursuant to Executive Order N-80-20, NOAs shall be posted for 30-days on the lead agency's website. When a Draft SEIR is sent to the State Clearinghouse for review, the public review period must be 45 days unless the State Clearinghouse (Public Resources Code 21091) approves a shorter period no less than 30 days.

D. Final SEIR

Once the Lead Agency has publicly circulated the Draft SEIR and collected all of the comments provided by public agencies and the general public, responses are prepared in writing that are included in the Final SEIR.

A Final SEIR must include: a) revisions to the Draft SEIR if necessary; b) copies of comments received during public review; c) list of persons and entities commenting; d) responses to comments; and e) any other information added by the lead agency.

E. Certification of Final SEIR

Prior to making a decision on a proposed project, the lead agency must certify that: a) the Final SEIR has been completed in compliance with CEQA; b) the Final SEIR was presented to the decision-making body of the lead agency; and c) the decision-making body reviewed and considered the information in the Final SEIR prior to approving a project (CEQA Guidelines Section 15090).

F. Lead Agency Project Decision

A lead agency may: a) deny a project because of its significant environmental effects; b) require changes to a project to reduce or avoid significant environmental effects; or c) approve a project despite its significant environmental effects, if the proper findings and Statement of Overriding Considerations are adopted (CEQA Guidelines Sections 15042 and 15043).

G. Findings/Statement of Overriding Considerations

For each significant impact of the project identified in the SEIR, the lead or responsible agency must find, based on substantial evidence, that either: a) the project has been changed to avoid or substantially reduce the magnitude of the impact; b) changes to the project are within another agency's jurisdiction and such changes have or should be adopted; or c) specific economic, social, or other considerations make the mitigation measures or project alternatives infeasible (CEQA Guidelines Section 15091). If an agency approves a project with unavoidable significant environmental effects, it must prepare a written Statement of Overriding Considerations that sets forth the specific social, economic, or other reasons supporting the agency's decision.

H. Mitigation Monitoring Reporting Program

When an agency makes findings on significant effects identified in the SEIR, it must adopt a reporting or monitoring program for mitigation measures that were adopted or made conditions of project approval to mitigate significant effects.

I. Notice of Determination

An agency must file a Notice of Determination (NOD) within 5 days after deciding to approve a project for which an SEIR is prepared (CEQA Guidelines Section 15094). A local agency must file the NOD with the State Clearinghouse and pursuant to Executive Order N-80-20, on the lead agency's website. The Notice must be posted for 30 days and sent to anyone previously requesting notice. Posting of the NOD starts a 30-day statute of limitations on CEQA legal challenges (Public Resources Code Section 21167[c]).

6. SEIR BACKGROUND

In accordance with the state CEQA Guidelines, the following steps have been conducted for the 2021-2029 Housing, Land Use, Safety, and Circulation Element General Plan Update SEIR:

A. Notice of Preparation and Scoping Meeting

Based on a preliminary review of the project, the City of Sierra Madre determined that the project could result in potentially significant environmental impacts. Therefore, the City prepared and circulated a Notice of Preparation (NOP) to the State Clearinghouse, relevant agencies, and interested parties. The City circulated the NOP for this project for 30 days from April 15, 2021 to May 14, 2021. A scoping meeting for the project was held on July 28, 2021. The NOP and comment letters are provided in Appendix A to this SEIR.

B. Draft SEIR and Public Review Period

The City has prepared and distributed a Notice of Completion/Notice of Availability (NOC/NOA) announcing the availability of a Draft SEIR for the proposed project to relevant agencies, neighborhood groups, NOP commenters, and interested parties. The Draft SEIR public review began on August 2, 2021 and ending September 15, 2021.

The Draft SEIR is available to the general public for review online at https://www.cityofsierramadre.com/cityhall/departments/planning_community_preservation_department/housing_element_update/environmental

The Draft SEIR is also available at the following locations:

City of Sierra Madre
Planning and Community Preservation Department
232 W. Sierra Madre Boulevard
Sierra Madre, CA 91024

Sierra Madre Public Library
440 W. Sierra Madre Boulevard
Sierra Madre, CA 91024

7. EIR SCOPE AND CONTENT

This Draft SEIR has identified environmental issue areas that were determined not to be significant due either the programmatic nature of the project, project location, or lack of relevant resource. These environmental topics were scoped out from detailed analysis in the SEIR, and are discussed in Section VII. Other CEQA Considerations These issues are listed below:

- **Agricultural and Forestry Resources** – All subtopics
- **Hazards and Hazardous Materials** – All subtopics
- **Hydrology and Water Quality** – All subtopics
- **Mineral Resources** – All subtopics

The SEIR addresses the environmental issues where the proposed project could result in potentially significant impacts. The scope of the environmental issues to be analyzed in this SEIR include:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources and Tribal Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Land Use/Planning
- Noise
- Population and Housing
- Public Services, including Police and Fire Protection Services, Recreation, and Wildfire
- Transportation
- Utilities and Service Systems

This SEIR addresses the abovementioned issues and identifies the potential environmental impacts of the proposed project. Consistent with Section 15130(b)(1)(B) of the CEQA Guidelines, this SEIR analyzes the cumulative environmental impacts of potential development that would be accommodated by adoption of the 2021-2029 Housing Element and General Plan Update. This SEIR addresses the cumulative impacts of development within the City of Sierra Madre and the larger region surrounding it, as appropriate. In most cases, the potential for cumulative impacts is contiguous with the City boundary, since the City is the service provider for various City services and public utilities. Potential cumulative impacts related to traffic, air quality, and greenhouse gases, which have the potential for impacts beyond the City boundary, have been addressed through use of a traffic model. In addition, the SEIR recommends mitigation measures, where feasible, that would eliminate or reduce significant environmental effects.

Lastly, since the preparation of the 2035 General Plan EIR in 2015, the CEQA Appendix G thresholds have undergone amendments and revisions. Therefore, this Subsequent EIR responds to those revisions and updates the analysis for the 2021-2029 Housing, Land Use, Safety, and Circulation Element General Plan Update to respond to the most current Appendix G thresholds.

The level of detail contained throughout this SEIR is consistent with the requirements of CEQA and applicable court decisions. The *CEQA Guidelines* provide the standard of adequacy on which this document is based. The *Guidelines* state:

An EIR should be prepared with a sufficient degree of analysis to provide decision-makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of the proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection, but for adequacy, completeness, and a good faith effort at full disclosure. (Section 15151)

II. EXECUTIVE SUMMARY

1. INTRODUCTION

This summary is intended to highlight the major areas of importance in the environmental analysis for the proposed project as required by Section 15123 of the CEQA Guidelines. The summary includes a brief description of the project, the project objectives, areas of controversy/issues to be resolved, and a summary of alternatives to the proposed project. In addition, this chapter provides a table summarizing: potential environmental impacts that would occur as a result of the proposed project and the recommended mitigation measures and/or project requirements that avoid or reduce significant environmental impacts.

2. PROJECT SUMMARY

The project is the adoption of the 2021-2029 Housing Element, related updates to the Land Use, Safety, and Circulation Elements. The Housing Element requires amending General Plan designations on some of the proposed Housing Element opportunity sites, which requires revisions to the Land Use Element and Land Use Map of the City of Sierra Madre General Plan. The Housing Element also necessitates rezoning of some proposed opportunity sites; therefore, the project includes changes to the City's Zoning Code and Zoning Map.

In addition to the Housing and Land Use Element updates, the City is required to make other changes to the General Plan in response to recent State legislation. To comply with Senate Bill (SB) 379, Assembly Bill (AB) 2140, and SB 1241, the project updates the Safety Element. The City recently adopted Transportation Study Guidelines for Vehicle Miles Traveled in July 2020. These Guidelines are incorporated into the General Plan Circulation Element.

3. PROJECT OBJECTIVES

Section 15124(b) of the California Environmental Quality Act (CEQA) Guidelines requires that a statement of objectives for the project includes the underlying purpose of the project.

The major objectives for the proposed project are as follows:

- Preserve and sustain Sierra Madre's distinctive character as a historic small town nestled in the foothills, but within a major metropolitan area.
- Ensure that Sierra Madre is a safe, vibrant place to live, work and visit by providing city services that match the needs of the community and promote community engagement.
- Protect and be responsible stewards of the neighboring San Gabriel Mountain foothill's wildlife, forest, open space, watershed and all other natural resources.
- Promote and develop a strong, diversified local economy and a thriving town center, consistent with the needs of the community.
- Ensure development is done in harmony with its neighborhood, while maintaining the character of the town and without unduly burdening existing city services and infrastructure or impacting the environment. •

4. AREAS OF CONTROVERSY

A total of three comment letters were received in response to the NOP. Issues raised in these comment letters included biological resources (impacts on wildlife corridors and wildlife, nesting birds, loss of bird and raptor nesting habitat, bats).

5. NEW ALTERNATIVES ARE NOT CONSIDERED

The 2015 General Plan EIR analyzed two alternatives: the No Project/Current General Plan Alternative and the Reduced Development Alternative. The Draft Subsequent EIR does not include analyses of any new alternatives to the project. New alternatives are required in a subsequent EIR when new information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete" shows that one or more alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, or alternatives that are considerably different from those analyzed in the 2015 program EIR would substantially reduce one or more significant effects on the environment (CEQA Guidelines Section 15162). There is no new information meeting the definition of Section 15162. The conditions within the City and its SOI are largely the same as when the 2015 DEIR was certified and the General Plan update approved.

6. COMPARISON OF ENVIRONMENTAL IMPACTS

Table II-1 compares the environmental impacts of the 2021 Sierra Madre General Plan Update project with the findings of the 2015 General Plan Update DEIR.

Table II-1
Comparison of 2021 Sierra Madre General Plan SEIR and 2015 General Plan DEIR Environmental Impacts

Environmental Impact	Comparison of 2021 GP SEIR to 2015 GP DEIR	Mitigation Measures	Level of Significance
Aesthetics			
Impact A-1: Would the project have a substantial adverse effect on a scenic vista?	Similar	None Required	Less than Significant
Impact A-2: Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	Similar	None Required	Less than Significant
Impact A-3: Would the project in non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	Similar	None Required	Less than Significant
Impact A-4: Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	Similar	None Required	Less than Significant
Air Quality			
Impact B-1: Would the Project conflict with or obstruct implementation of the applicable air quality plan?	Similar	None Required	Less than Significant
Impact B-2: 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?	Similar (Operation)	None Required	Less than Significant

Table II-1
Comparison of 2021 Sierra Madre General Plan SEIR and 2015 General Plan DEIR Environmental Impacts

Environmental Impact	Comparison of 2021 GP SEIR to 2015 GP DEIR	Mitigation Measures	Level of Significance
Impact B-2: 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?	Similar (Construction)	**AQ-1: GP EIR MM 2-1.** If, during subsequent project-level environmental review conducted for individual development projects, construction-related criteria air pollutants are determined to have the potential to exceed the South Coast Air Quality Management District (SCAQMD) adopted thresholds of significance, the City of Sierra Madre Planning and Community Preservation Department shall require that applicants for new development projects incorporate mitigation measures as identified in the CEQA document prepared for the project to reduce air pollutant emissions during construction activities. Mitigation measures that may be identified during the environmental review include but are not limited to: • Using construction equipment rated by the United States Environmental Protection Agency as having Tier 3 (model year 2006 or newer) or Tier 4 (model year 2008 or newer) emission limits, applicable to engines between 50 and 750 horsepower. • Ensuring construction equipment is properly serviced and maintained to the manufacturer's standards. • Limiting nonessential idling of construction equipment to no more than five consecutive minutes. • Water all active construction areas at least three times daily, or as often as needed to control dust emissions. Watering should be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water should be used whenever possible. • Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard (i.e., the	Significant Unavoidable

Table II-1
Comparison of 2021 Sierra Madre General Plan SEIR and 2015 General Plan DEIR Environmental Impacts

Environmental Impact	Comparison of 2021 GP SEIR to 2015 GP DEIR	Mitigation Measures	Level of Significance
		minimum required spaced between the top of the load and the top of the trailer). • Pave, apply water three times daily or as often as necessary to control dust, or apply (non-toxic) soil stabilizer on all unpaved access roads, parking areas, and staging areas at construction sites. • Sweep daily (with water sweepers using reclaimed water if possible), or as often as needed, all paved access roads, parking areas, and staging areas at the construction site to control dust. • Sweep public streets daily (with water sweepers using reclaimed water if possible) in the vicinity of the project site, or as often as needed, to keep streets free of visible soil material. • Hydroseed or apply non-toxic soil stabilizers to inactive construction areas. • Enclose, cover, water three times daily, or apply non-toxic soil binders to exposed stockpiles (dirt, sand, etc.)	
Impact B-3: Would the project expose sensitive receptors to substantial pollutant concentrations?	Less	**AQ-1: GP EIR MM 2-1.** If, during subsequent project-level environmental review conducted for individual development projects, construction-related criteria air pollutants are determined to have the potential to exceed the South Coast Air Quality Management District (SCAQMD) adopted thresholds of significance, the City of Sierra Madre Planning and Community Preservation Department shall require that applicants for new development projects incorporate mitigation measures as identified in the CEQA document prepared for the project to reduce air pollutant emissions during construction activities. Mitigation measures that may be identified during the environmental review include but are not limited to:	Less than Significant

Table II-1
Comparison of 2021 Sierra Madre General Plan SEIR and 2015 General Plan DEIR Environmental Impacts

Environmental Impact	Comparison of 2021 GP SEIR to 2015 GP DEIR	Mitigation Measures	Level of Significance
		• Using construction equipment rated by the United States Environmental Protection Agency as having Tier 3 (model year 2006 or newer) or Tier 4 (model year 2008 or newer) emission limits, applicable to engines between 50 and 750 horsepower. • Ensuring construction equipment is properly serviced and maintained to the manufacturer's standards. • Limiting nonessential idling of construction equipment to no more than five consecutive minutes. • Water all active construction areas at least three times daily, or as often as needed to control dust emissions. Watering should be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water should be used whenever possible. • Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard (i.e., the minimum required spaced between the top of the load and the top of the trailer). • Pave, apply water three times daily or as often as necessary to control dust, or apply (non-toxic) soil stabilizer on all unpaved access roads, parking areas, and staging areas at construction sites. • Sweep daily (with water sweepers using reclaimed water if possible), or as often as needed, all paved access roads, parking areas, and staging areas at the construction site to control dust.	

Table II-1
Comparison of 2021 Sierra Madre General Plan SEIR and 2015 General Plan DEIR Environmental Impacts

Environmental Impact	Comparison of 2021 GP SEIR to 2015 GP DEIR	Mitigation Measures	Level of Significance
		• Sweep public streets daily (with water sweepers using reclaimed water if possible) in the vicinity of the project site, or as often as needed, to keep streets free of visible soil material. • Hydroseed or apply non-toxic soil stabilizers to inactive construction areas. • Enclose, cover, water three times daily, or apply non-toxic soil binders to exposed stockpiles (dirt, sand, etc.)	
Impact B-4: Would the Project result in other emissions (such as those leading to odors) affecting a substantial number of people?	Similar	None Required	Less than Significant
Biological Resources			
Impact C-1: Would the project 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 Game or U.S. Fish and Wildlife Service?	Greater	**BIO-1: Focused Bat Surveys.** Prior to any demolition activities, a bat survey shall be conducted by a qualified biologist. Where project-related implementation, construction, and activities would occur near potential roosting habitat for bats, such as buildings or tall trees, a qualified bat specialist shall conduct bat surveys within these areas (plus a 100-foot buffer as access allows) to identify potential habitat that could provide daytime and/or nighttime roost sites, and any maternity roosts. Surveys should be conducted using acoustic recognition technology to maximize detection of bats. A discussion of survey results, including negative findings should be provided to the City. Depending on the survey results, a qualified bat specialist should discuss potentially significant effects of the project on bats and include species specific mitigation measures to reduce impacts to below a level of significance. Surveys, reporting, and preparation of robust mitigation measures by a qualified bat specialist should be completed and submitted to the City prior to any project-related	Less than Significant

Table II-1
Comparison of 2021 Sierra Madre General Plan SEIR and 2015 General Plan DEIR Environmental Impacts

Environmental Impact	Comparison of 2021 GP SEIR to 2015 GP DEIR	Mitigation Measures	Level of Significance
		demolition, ground-disturbing activities, or vegetation removal at or near locations of roosting habitat for bats. If bats are not detected, but the bat specialist determines that roosting bats may be present at any time of year and could roost at a given location, species specific mitigation measures shall be required to reduce impacts to below a level of significance. If maternity roosts are found, to the extent feasible, work should be scheduled between October 1 and February 28, outside of the maternity roosting season when young bats are present but are yet ready to fly out of the roost (March 1 to September 30). If maternity roosts are found and the City determines that impacts are unavoidable, a qualified bat specialist should conduct a preconstruction survey. Acoustic recognition technology should be used to maximize the detection of bats. Each tree identified as potentially supporting an active maternity roost should be closely inspected by the bat specialist no more than 7 days prior to tree disturbance to determine the presence or absence of roost bats more precisely. If maternity roosts are detected, trees/structures determined to be maternity roosts should be left in place until the end of the maternity season. Work should not occur within 100 feet of or directly under or adjacent to an active roost. Work should also not occur between 30 minutes before subset and 30 minutes after sunrise.	
Impact C-1: Would the project 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	Greater	**BIO-2: Nesting Bird and Raptor Surveys.** Ground-disturbing activities (e.g., mobilizing, staging, drilling, and excavating) and vegetation removal shall occur outside of the avian breeding season which generally runs from February 15 through August 31 (as early as	Less than Significant

Table II-1
Comparison of 2021 Sierra Madre General Plan SEIR and 2015 General Plan DEIR Environmental Impacts

Environmental Impact	Comparison of 2021 GP SEIR to 2015 GP DEIR	Mitigation Measures	Level of Significance
regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?		January 1 for some raptors) to avoid take of birds, raptors, or their eggs. Surveys shall be conducted to detect protected native birds and raptors occurring in suitable nesting habitat that may be disturbed and any other such habitat within 300 feet of the project disturbance area, to the extent allowable and accessible. For raptors, this radius shall be expanded to 500 feet and 0.5 mile for special status species, if feasible. Project personnel, including all contractors working on site, shall be instructed on the sensitivity of the area. Reductions in the nest buffer distance may be appropriate depending on the avian species involved, ambient levels of human activity, screening vegetation, or possibly other factors.	
Impact C-2: Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	Similar	None Required	Less than Significant
Impact C-3: Would the project have a substantial adverse effect on state or federally protected wetlands (including but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	Similar	None Required	Less than Significant
Impact C-4: Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species to with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	Similar	None Required	Less than Significant

Table II-1
Comparison of 2021 Sierra Madre General Plan SEIR and 2015 General Plan DEIR Environmental Impacts

Environmental Impact	Comparison of 2021 GP SEIR to 2015 GP DEIR	Mitigation Measures	Level of Significance
Impact C-5: Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	Similar	None Required	Less than Significant
Impact C-6: Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	Similar	None Required	Less than Significant
Cultural Resources			
Impact D-1: Would the project create a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	Similar	**CUL-1: GP EIR MM 5.4-1.** Prior to any construction activities of individual projects that may affect historic resources, a historic resources technical assessment/study shall be performed by an architectural historian or historian who meets the Secretary of the Interior's Professional Qualifications Standards requirements in architectural history or history; the technical assessment/study shall be submitted to the City of Sierra Madre for review and approval. The technical assessment/study shall include a records search at the South Central Coastal Information Center to determine if any resources that may potentially be affected by the project have been previously recorded, evaluated, and/or designated on the National Register of Historic Places or California Register of Historic Resources, or any other state or local historic resources registry/database. Following the records search, the qualified architectural historian or historian shall conduct a reconnaissance-level and/or intensive-level survey in accordance with the California Office of Historic Preservation guidelines to identify any previously unrecorded potential historic resources that may potentially be affected by the proposed project. If the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code Section 5024.1, Title 14 CCR,	Less than Significant

Table II-1
Comparison of 2021 Sierra Madre General Plan SEIR and 2015 General Plan DEIR Environmental Impacts

Environmental Impact	Comparison of 2021 GP SEIR to 2015 GP DEIR	Mitigation Measures	Level of Significance
		Section 4852), mitigation shall be identified within the technical study that ensures the value of the historic resource is maintained. To ensure that individual projects requiring the relocation, rehabilitation, or alteration of a historic resource do not impair its significance, the Secretary of the Interior's Standards for the Treatments of Historic Properties (Standards) shall be used. The application of the standards shall be overseen by a qualified architectural historian or historic architect meeting the Secretary of the Interior's Professional Qualifications Standards. Prior to any construction activities that may affect the historic resource, a report identifying and specifying the treatment of character-defining features and construction activities shall be provided to the City of Sierra Madre. If an individual project would result in the demolition or significant alteration of a historic resource, it cannot be mitigated to a less than significant level. However, recordation of the resource prior to construction activities will assist in reducing adverse impacts to the resource to the greatest extent possible (but not avoid a significant impact). Recordation shall take the form of Historic American Buildings Survey, Historic American Engineering Record, or Historic American Landscape Survey documentation, and shall be performed by an architectural historian or historian who meets the Secretary of the Interior's Professional Qualifications Standards. Documentation shall include an architectural and historical narrative; medium- or large-format black-and-white photographs, negatives, and prints; and supplementary information such as building plans and elevations and/or historic photographs. Documentation shall be reproduced on archival paper and placed in appropriate local, state, or federal	

Table II-1
Comparison of 2021 Sierra Madre General Plan SEIR and 2015 General Plan DEIR Environmental Impacts

Environmental Impact	Comparison of 2021 GP SEIR to 2015 GP DEIR	Mitigation Measures	Level of Significance
		institutions. The specific scope and details of documentation will be developed at the project level.	
Impact D-2: Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	Potentially Significant	**CUL-2: GP EIR MM 5.4-2.** Prior to the issuance of any grading permit, applicant's for future development projects shall demonstrate to the City's Planning and Community Preservation Department that a Los Angeles County-certified archaeologist has been retained to observe grading activities greater than six feet in depth and salvage and catalogue archaeological resources as necessary. The archaeologist shall be present at the pre-grade conference, shall establish procedures for archaeological resource surveillance, and shall establish, in cooperation with the applicant, procedures for temporarily halting or redirecting work to permit the sampling, identification, and evaluation of the artifacts as appropriate. If subsurface cultural resources are inadvertently discovered during ground-disturbing activities (e.g., construction, devegetation, etc.), the construction contractor shall ensure that all work stops within 25 feet of the find until the qualified archaeologist can assess the significance of the find and, if necessary, shall develop appropriate treatment or disposition of the resources in consultation with the City of Sierra Madre and representatives of any affected Native American tribes. The archaeologist monitor, in coordination with the construction contractor, shall have the authority to halt any project-related activities that may be adversely impacting potentially significant cultural resources. Suspension of ground disturbances in the vicinity of the discoveries shall not be lifted until an archaeologist monitor has evaluated the discoveries to assess whether they are classified as significant cultural resources, pursuant to the California Environmental Quality Act.	Less than Significant

Table II-1
Comparison of 2021 Sierra Madre General Plan SEIR and 2015 General Plan DEIR Environmental Impacts

Environmental Impact	Comparison of 2021 GP SEIR to 2015 GP DEIR	Mitigation Measures	Level of Significance
		If the archaeological resources are found to be significant, then the project applicant shall be required to perform data recovery, professional identification, radiocarbon dates as applicable, and other special studies; submit materials to the California State University, Fullerton; and provide a comprehensive final report to the City including appropriate records for the California Department of Parks and Recreation (Building, Structure, and Object Record; Archaeological Site Record; or District Record, as applicable). Any materials meeting significant criteria under CEQA should be donated to the County of Los Angeles or an accredited repository such as the Natural History Museum of Los Angeles County. Materials including isolates that do not meet those criteria may be offered to the Sierra Madre Historical Preservation Society or local school district for educational use.	
Impact D-3: Would the project disturb any human remains, including those interred outside of dedicated cemeteries?	Similar	None Required	Less than Significant
Impact D-4: Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: *a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or*	Potentially Significant	**CUL-2: GP EIR MM 5.4-2.** Prior to the issuance of any grading permit, applicant's for future development projects shall demonstrate to the City's Planning and Community Preservation Department that a Los Angeles County-certified archaeologist has been retained to observe grading activities greater than six feet in depth and salvage and catalogue archaeological resources as necessary. The archaeologist shall be present at the pre-grade conference, shall establish procedures for archaeological resource surveillance, and shall establish, in cooperation with the applicant, procedures for temporarily halting or redirecting work to permit the sampling, identification, and evaluation of the artifacts as appropriate. If subsurface cultural resources are inadvertently discovered during ground-disturbing activities (e.g., construction, devegetation, etc.),	Less than Significant

Table II-1
Comparison of 2021 Sierra Madre General Plan SEIR and 2015 General Plan DEIR Environmental Impacts

Environmental Impact	Comparison of 2021 GP SEIR to 2015 GP DEIR	Mitigation Measures	Level of Significance
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.		the construction contractor shall ensure that all work stops within 25 feet of the find until the qualified archaeologist can assess the significance of the find and, if necessary, shall develop appropriate treatment or disposition of the resources in consultation with the City of Sierra Madre and representatives of any affected Native American tribes. The archaeologist monitor, in coordination with the construction contractor, shall have the authority to halt any project-related activities that may be adversely impacting potentially significant cultural resources. Suspension of ground disturbances in the vicinity of the discoveries shall not be lifted until an archaeologist monitor has evaluated the discoveries to assess whether they are classified as significant cultural resources, pursuant to the California Environmental Quality Act. If the archaeological resources are found to be significant, then the project applicant shall be required to perform data recovery, professional identification, radiocarbon dates as applicable, and other special studies; submit materials to the California State University, Fullerton; and provide a comprehensive final report to the City including appropriate records for the California Department of Parks and Recreation (Building, Structure, and Object Record; Archaeological Site Record; or District Record, as applicable). Any materials meeting significant criteria under CEQA should be donated to the County of Los Angeles or an accredited repository such as the Natural History Museum of Los Angeles County. Materials including isolates that do not meet those criteria may be offered to the Sierra Madre Historical Preservation Society or local school district for educational use.	

Table II-1
Comparison of 2021 Sierra Madre General Plan SEIR and 2015 General Plan DEIR Environmental Impacts

Environmental Impact	Comparison of 2021 GP SEIR to 2015 GP DEIR	Mitigation Measures	Level of Significance
Geology and Soils			
Impact E-1: Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: *i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issues 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),* *ii. Strong seismic ground shaking,* *iii. Seismic-related ground failure, including liquefaction, or* *iv. Landslides?*	Similar	None Required	Less than Significant
Impact E-2: Would the project result in substantial soil erosion or the loss of topsoil?	Similar	None Required	Less than Significant
Impact E-3: Would the project 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?	Similar	None Required	Less than Significant
Impact E-4: Would the project be located on expansive soils, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	Similar	None Required	Less than Significant

Table II-1
Comparison of 2021 Sierra Madre General Plan SEIR and 2015 General Plan DEIR Environmental Impacts

Environmental Impact	Comparison of 2021 GP SEIR to 2015 GP DEIR	Mitigation Measures	Level of Significance
Impact E-5: Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of water?	Similar	None Required	Less than Significant
Impact E-6: Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Potentially Significant	**GEO-1: GP EIR MM 5.4-2.** In the event that paleontological resources (sites, features, artifacts, or fossilized remains) are exposed during construction activities, the City of Sierra Madre shall be notified immediately and all work shall cease within a 50-foot radius of the discovery. A qualified paleontologist shall determine whether additional study shall be warranted. Construction activity may continue unimpeded on other portions of the project site. Personnel of the project shall not collect or move any paleontological materials and associated materials. The found deposits shall be treated in accordance with Federal, State, and local guidelines, including those set forth in PRC Section 21083.2. Any significant fossils collected during project-related excavations shall be prepared to the point of identification and curated into an accredited repository with retrievable storage. The qualified paleontologist shall prepare a final monitoring and mitigation report for submittal to the City in order to document the results of the monitoring effort and any discoveries. If there are significant discoveries, fossil locality information and final disposition shall be included with the final report which shall be submitted to the appropriate repository and the City.	Less than Significant
Greenhouse Gases Emissions			
Impact F-1: Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Similar	None Required	Less than Significant

Table II-1
Comparison of 2021 Sierra Madre General Plan SEIR and 2015 General Plan DEIR Environmental Impacts

Environmental Impact	Comparison of 2021 GP SEIR to 2015 GP DEIR	Mitigation Measures	Level of Significance
Impact F-2: Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	Less	None Required	Less than Significant
Impact F-3: Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	Similar	None Required	Less than Significant
Impact F-4: Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	Similar	None Required	Less than Significant
Land Use and Planning			
Impact G-1: Would the project physically divide an established community?	Similar	None Required	Less than Significant
Impact G-2: Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purposes of avoiding or mitigating an environmental effect?	Similar	None Required	Less than Significant
Noise			
Impact H-1: Would the project generate substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	Similar (Construction)	**NOI-1: GP EIR MM 5.10-5.** **10-1.** Construction contractors shall: 1. Require that construction vehicles and equipment (fixed or mobile) be equipped with properly operating and maintained mufflers.	Significant Unavoidable

Table II-1
Comparison of 2021 Sierra Madre General Plan SEIR and 2015 General Plan DEIR Environmental Impacts

Environmental Impact	Comparison of 2021 GP SEIR to 2015 GP DEIR	Mitigation Measures	Level of Significance
		2. Restrict haul routes and construction-related traffic. 3. Place stock piling and/or vehicle-staging areas as far as practical from residential uses. 4. Replace audible backup warning devices with strobe lights or other warning devices during evening construction activity to the extent permitted by the California Division of Occupational Safety and Health. 5. Reduce nonessential idling of construction equipment to no more than five minutes. 6. Consider the installation of temporary sound barriers for construction activities that are adjacent to occupied noise-sensitive structures when construction activity with multiple pieces of equipment occurs within 50 feet of a sensitive property line. Barriers should block the line of sight.	
Impact H-1: Would the project generate substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	Similar (Operation)	None Required	Less than Significant
Impact H-2: Would the project generate excessive groundborne vibration or groundborne noise levels?	Similar	**NOI-2: GP EIR MM 5.10-6** **10-2.** Individual development projects that involve vibration-intensive construction activities—such as blasting, pile drivers, jack hammers, and vibratory rollers—within 200 feet of sensitive receptors shall be evaluated for potential vibration impacts. A construction-related vibration study shall be conducted for individual development projects where vibration-intensive impacts may occur.	Significant Unavoidable

Table II-1
Comparison of 2021 Sierra Madre General Plan SEIR and 2015 General Plan DEIR Environmental Impacts

Environmental Impact	Comparison of 2021 GP SEIR to 2015 GP DEIR	Mitigation Measures	Level of Significance
		If construction-related vibration is determined to be perceptible at vibration-sensitive uses, additional requirements, such as use of less-vibration-intensive equipment or construction techniques, shall be implemented during construction (e.g., nonexplosive blasting methods, drilled piles as opposed to pile driving, etc.).	
Impact H-3: For a project located within the vicinity of a private airstrip or 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?	Similar	None Required	Less than Significant
Population and Housing			
Impact I-1: Would the project Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	Similar	None Required	Less than Significant
Impact I-2: Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	Similar	None Required	Less than Significant
Public Services			
Impact J-1: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in	Similar	None Required	Less than Significant

Table II-1
Comparison of 2021 Sierra Madre General Plan SEIR and 2015 General Plan DEIR Environmental Impacts

Environmental Impact	Comparison of 2021 GP SEIR to 2015 GP DEIR	Mitigation Measures	Level of Significance
order to maintain acceptable service ratios, response times or other performance objective for fire protection?			
Impact J-2: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objective for police protection?	Similar	None Required	Less than Significant
Impact J-3: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objective for schools?	Similar	None Required	Less than Significant
Impact J-4: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objective for parks?	Similar	None Required	Less than Significant
Impact J-5: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in	Similar	None Required	Less than Significant

Table II-1
Comparison of 2021 Sierra Madre General Plan SEIR and 2015 General Plan DEIR Environmental Impacts

Environmental Impact	Comparison of 2021 GP SEIR to 2015 GP DEIR	Mitigation Measures	Level of Significance
order to maintain acceptable service ratios, response times or other performance objective for other public facilities?			
Transportation			
Impact K-1: Would the project conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	Similar	None Required	Less than Significant
Impact K-2: Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	N/A	A TDM program would be implemented as part of each opportunity site's mitigation program aimed at further reducing VMT and vehicular trips to each Project Site through transportation services. The TDM Program would be intended to promote non-automobile travel and the reduction of single occupancy vehicle trips. As the individual development projects are submitted to the City, the TDM program for each opportunity site would be subject to review and approval by the City. The individual site TDM programs analyzed for the analysis would include various combinations of the Tier 4 TDM measures listed on the bottom of Table IV.K-1. These strategies include school carpool programs, marketing and education, telecommuting and alternative work schedules, neighborhood schools, unbundled parking costs, and bike share programs. Each of these strategies is explained briefly below. **TDM Mitigation Strategies** **School Carpool Programs** The individual site's TDM program would provide services to match residents to establish carpools to provide the potential for school-aged children to carpool to and from school and reduce the number of vehicle trips to and from each Site.	Less than Significant

Table II-1
Comparison of 2021 Sierra Madre General Plan SEIR and 2015 General Plan DEIR Environmental Impacts

Environmental Impact	Comparison of 2021 GP SEIR to 2015 GP DEIR	Mitigation Measures	Level of Significance
		Marketing and Education The TDM program would provide informational services to opportunity site residents to educate them on the various non-automobile travel modes available in the area. Generally, this program consists of an informational kiosk in the development with information on accessible transit, bike, and ride-sharing services. **Telecommuting and Alternative Work Schedules** The TDM program would encourage or incentivize working from home and/or alternative work schedules that reduce the potential for employees to travel to work thereby reducing the number of vehicle trips to and from the Project Site. **Provision of Neighborhood Schools** The TDM program would encourage opportunity site residents to send children to local schools rather than out-of-area schools to reduce travel distance of trips between the Sites and schools. **Unbundling Parking Costs** The individual site's TDM Program would unbundle the parking costs from the rental/sale price of the multifamily unit. The parking space monthly rental or purchase price would be separated from the unit monthly rental or purchase price. Research has shown that the number of vehicles per household decreases when the tenants/owners realize the actual costs of the parking spaces fr residential units and the overall VMT form that unit decreases.	

Table II-1
Comparison of 2021 Sierra Madre General Plan SEIR and 2015 General Plan DEIR Environmental Impacts

Environmental Impact	Comparison of 2021 GP SEIR to 2015 GP DEIR	Mitigation Measures	Level of Significance
		Bike Share Programs The individual site's TDM program would provide either financial assistance or physical space to help establish or expand a City-wide bike share program.	
Impact K-3: Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	Similar	None Required	Less than Significant
Impact K-4: Would the project result in inadequate emergency access.?	Similar	None Required	Less than Significant
Impact L-1: Would the project require or result in the relocation or construction of new or expanded water facilities, the construction or relocation of which could cause significant environmental effects?	Similar	None Required	Less than Significant
Impact L-2: Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	Less	**UT-1: GP EIR MM 13-1.** The City of Sierra Madre shall apply the city's water conservation measures and policies (including those of the General Plan Update) to all development proposals (new development and redevelopment) and encourage water conservation in construction and landscape design. **UT-2: GP EIR MM 13-2.** The City of Sierra Madre shall promote energy efficiency and water conservation upgrades to existing non-residential buildings at the time of major remodel or additions. **UT-3: GP EIR MM 13-3.** The City of Sierra Madre shall evaluate development proposals (new development and redevelopment) for consistency with the 2020 Green Building Standards Code (adopted by	Less than Significant

Table II-1
Comparison of 2021 Sierra Madre General Plan SEIR and 2015 General Plan DEIR Environmental Impacts

Environmental Impact	Comparison of 2021 GP SEIR to 2015 GP DEIR	Mitigation Measures	Level of Significance
		reference in Chapter 15.30 [Green Building Standards Code] of the City's Municipal Code. **UT-4: GP EIR MM 13-4.** The City of Sierra Madre shall evaluate development proposals (new development and redevelopment) for consistency with the city's Water Efficient Landscape Ordinance (Chapter 15.60 of the city's Municipal Code) and Low Impact Development Ordinance (integrated within Section 15.04.070 [Stormwater Retention] of the city's Municipal Code) to ensure that development proposals incorporate all necessary and feasible water conservation measures. **UT-5: GP EIR MM 13-5**. The City of Sierra Madre shall require that all development proposals (new development and redevelopment) demonstrate a sufficient and sustainable water supply (i.e., provision of a "will serve" letter from the city's Water Division) prior to approval of the development proposal, consistent with the requirement of the city's Water Division. **UT-6: GP EIR MM 13-6.** The City of Sierra Madre shall encourage project applicants/developers of development proposals (new development and redevelopment), where feasible, to retain stormwater for onsite use and thereby offset the use of other water sources. **UT-7: GP EIR MM 13-7.** The City of Sierra Madre shall monitor development growth and coordinate with the city's Water Division to ensure that long-range needs for potable water will be met. **UT-8: GP EIR MM 13-8.** If water supplies are reduced from projected levels due to drought, emergency, or other unanticipated events, the City of Sierra Madre shall take appropriate steps to limit, reduce, or otherwise modify growth permitted by the General Plan Update in	

Table II-1
Comparison of 2021 Sierra Madre General Plan SEIR and 2015 General Plan DEIR Environmental Impacts

Environmental Impact	Comparison of 2021 GP SEIR to 2015 GP DEIR	Mitigation Measures	Level of Significance
		consultation with the city's Water Division to ensure adequate long-term supply for existing businesses and residents. **UT-9: GP EIR MM 13-9.** The City of Sierra Madre shall conduct a periodic assessment of the city's water conservation measures and policies based on water supply changes, droughts, and environmental issues (e.g. contamination of potable water). **UT-10: GP EIR MM 13-10.** The City of Sierra Madre shall promote programs for retrofitting plumbing, providing cost rebates, identifying leaks, changing landscaping, irrigating efficiently and other methods of reducing water consumption by existing users. **UT-11: GP EIR MM 13-11.** The City of Sierra Madre shall assess the water use by city buildings and facilities (e.g. City Hall, parks) and reduce water consumption to the maximum extent practicable. **UT-12: GP EIR MM 13-12**. The City of Sierra Madre shall develop an information sharing program in cooperation with the city's Water Division to make appropriate data available to the public pertaining to water supply and water use in Sierra Madre.	
Impact L-3: Would the project require or result in the relocation of construction of new or expanded wastewater treatment facilities, the construction or relocation of which could cause significant environmental effects?	Similar	None Required	Less than Significant
Impact L-4: Would the project result in a determination by the wastewater treatment provider that is has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	Similar	None Required	Less than Significant

Table II-1
Comparison of 2021 Sierra Madre General Plan SEIR and 2015 General Plan DEIR Environmental Impacts

Environmental Impact	Comparison of 2021 GP SEIR to 2015 GP DEIR	Mitigation Measures	Level of Significance
Impact L-5: Would the project require or result in the relocation of construction of new or expanded stormwater drainage facilities, the construction or relocation of which could cause significant environmental effects?	Similar	None Required	Less than Significant
Impact L-6: Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	Similar	None Required	Less than Significant
Impact L-6: Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	Similar	None Required	Less than Significant

EcoTierra Consulting, 2021.

III. PROJECT DESCRIPTION

1. PROJECT LOCATION

Sierra Madre is a city in the foothills of the San Gabriel Valley at the southern edge of the Angeles National Forest, approximately 17 miles northeast of downtown Los Angeles at the base of the San Gabriel Mountains. The City is in the central region of Los Angeles County and is bounded by the cities of Arcadia to the east and south, and Pasadena to the west and the Angeles National Forest to the north (see Figure III-1, Regional Location and Project Vicinity Map).

The city is generally bounded by Orange Grove Avenue on the south, Michillinda Avenue on the west, Santa Anita Avenue on the east, and the San Gabriel Mountains to the north. The nearest major transportation corridor to the city is Interstate 210 (I-210), which runs in an east-west direction through the City of Arcadia approximately one-half mile south of the City limits and serves as the gateway connector to the regional freeway network for residents of Sierra Madre. No interstate or state route crosses the City's boundaries.

2. PROJECT CHARACTERISTICS

A. Current General Plan

The current Sierra Madre General Plan was adopted on July 14, 2015. The General Plan contains four chapters, each with a series of sections or topics related to that particular chapter. Per California Government Code Section 65300, there are seven mandatory elements of a general plan—land use, housing, circulation, open space, conservation, noise, and safety. The law does not require that these elements be organized in a particular fashion, and it allows for additional elements as the jurisdiction deems necessary to address local needs and objectives. The Sierra Madre General Plan includes the following four chapters and topic areas:

Chapter One - Land Use

1. Land Use Designations
2. Historic Preservation
3. Housing
4. Economic Development
5. Circulation

Chapter Two - Resource Management

1. Hillside Preservation
2. Co-existence with Wildlife
3. Dark Sky
4. Tree Preservation
5. Water Resources
6. Waste Management/Recycling
7. Air Quality

Chapter Three - Hazard Prevention

1. Fire Safety
2. Flood/Landslide
3. Seismic Safety
4. Noise

Chapter Four - Community Services

1. Law Enforcement
2. Recreation Services
3. Library Services
4. Community Cultural and Special Events
5. Transit
6. Public Services

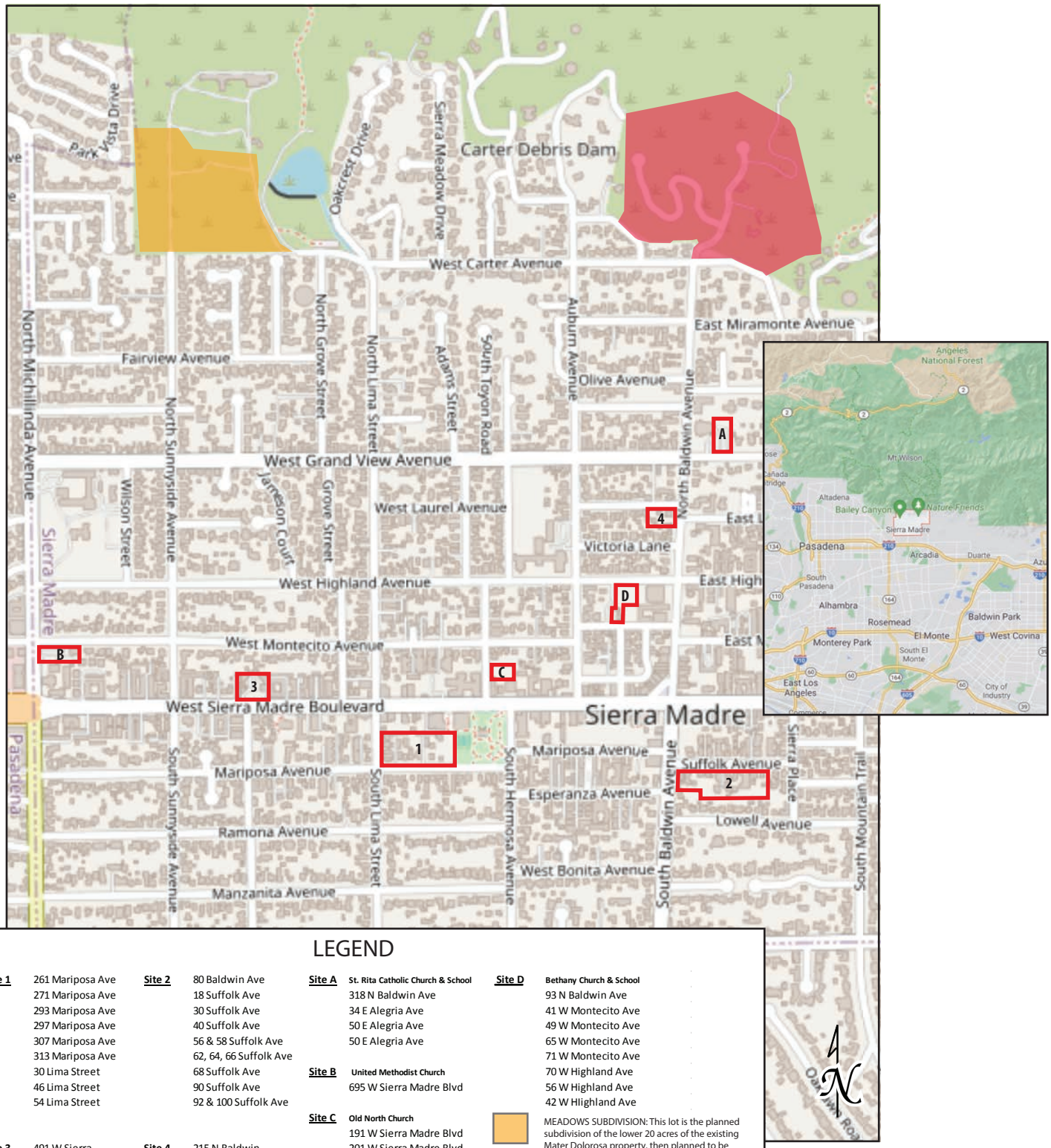
B. Description of the Project

The project is the adoption of the 2021-2029 Housing Element, related updates to the Land Use, Safety, and Circulation Elements. The Housing Element requires amending General Plan designations on some of the proposed Housing Element opportunity sites, which requires revisions to the Land Use Element and Land Use Map of the City of Sierra Madre General Plan. The Housing Element also necessitates rezoning of some proposed opportunity sites; therefore, the project includes changes to the City's Zoning Code and Zoning Map.

In addition to the Housing and Land Use Element updates, the City is required to make other changes to the General Plan in response to recent State legislation. To comply with Senate Bill (SB) 379, Assembly Bill (AB) 2140, and SB 1241, the project updates the Safety Element. The City recently adopted Transportation Study Guidelines for Vehicle Miles Traveled in July 2020. These Guidelines are incorporated into the General Plan Circulation Element.

i) 2021-2029 Housing Element

California's Housing Element law requires that each city and county develop local housing programs to meet its "fair share" of existing and future housing needs for all income groups. The Southern California Association of Governments (SCAG) is assigning these regional needs, known as the Regional Housing Needs Allocation (RHNA), to southern California jurisdictions. Pursuant to the RHNA planning period, the Sierra Madre Housing Element is an eight-year plan extending from 2021-2029.



LEGEND

Site 1
261 Mariposa Ave
271 Mariposa Ave
293 Mariposa Ave
297 Mariposa Ave
307 Mariposa Ave
313 Mariposa Ave
30 Lima Street
46 Lima Street
54 Lima Street

Site 2
80 Baldwin Ave
18 Suffolk Ave
30 Suffolk Ave
40 Suffolk Ave
56 & 58 Suffolk Ave
62, 64, 66 Suffolk Ave
68 Suffolk Ave
90 Suffolk Ave
92 & 100 Suffolk Ave

Site 3
491 W Sierra Madre Blvd

Site 4
215 N Baldwin Ave

Site A St. Rita Catholic Church & School
318 N Baldwin Ave
34 E Alegria Ave
50 E Alegria Ave
50 E Alegria Ave

Site B United Methodist Church
695 W Sierra Madre Blvd

Site C Old North Church
191 W Sierra Madre Blvd
201 W Sierra Madre Blvd
191 W Sierra Madre Blvd
34 N Hermosa Ave
40 N Hermosa Ave

Site D Bethany Church & School
93 N Baldwin Ave
41 W Montecito Ave
49 W Montecito Ave
65 W Montecito Ave
71 W Montecito Ave
70 W Highland Ave
56 W Highland Ave
42 W Hlighland Ave

MEADOWS SUBDIVISION: This lot is the planned subdivision of the lower 20 acres of the existing Mater Dolorosa property, then planned to be subdivided into 42 Residential lots and 1 City Park.

STONEGATE SUBDIVISION: These parcels are the completed subdivision of the One Carter property to 27 Residential lots and 2 undevelopable lots.

Source: OpenStreetMaps, March 2021.

Figure III-1
Regional and Project Vicinity Map

The City of Sierra Madre, along with all cities and counties in California, is mandated by California State law to prepare a Housing Element update for State certification every eight years. The Housing Element is a state-mandated part of the City's General Plan and includes goals, policies, programs and objectives to further the development, improvement and preservation of housing in Sierra Madre in a manner that is aligned with community desires, as well as regional growth objectives and State law. Local governments must adequately plan to meet the existing and projected housing needs of all economic segments of the community. Specifically, State Government Code Section 65583 requires the Housing Element to identify and analyze existing and projected housing needs, and establish goals, policies, and actions to address these housing needs, including adequate provision of affordable and special-needs housing (e.g., housing for seniors and persons with disabilities). State law requires local jurisdictions to identify available sites that have the appropriate land use and zoning to accommodate estimated housing growth projections.

On January 28, 2014, the City of Sierra Madre adopted the 2014–2021 Housing Element. The Element included the provision of sufficient land for the construction of the housing units that the City of Sierra Madre needed to accommodate the RHNA by 2021. The 2014-2021 RHNA allocation equaled 55 new housing units.

The RHNA quantifies the need for housing in every region throughout the state and is determined by the California Department of Housing and Community Development (HCD). The RHNA is mandated by state law and is meant to inform the local planning process by addressing existing and future housing need resulting from estimated growth in population, employment, and households. SCAG is responsible for allocating the RHNA to each city and county in its region, which includes Sierra Madre.

In August 2019, the HCD issued its final Regional Housing Need Determination to SCAG, stating that the minimum regional housing need for the SCAG region is 1.34 million new housing units. HCD then directed SCAG to develop a methodology to allocate all 1.34 million units throughout the region, based on statutory guidelines for housing needs and development.

SCAG developed a methodology and distributed a RHNA allocation to all the cities and counties in its region, including the City of Sierra Madre for the 2021-2029 Housing Element planning period. The City's total RHNA for the 2021-2029 planning period is 204 units, allocated to specific income groups as shown in Table III-1.

Table III-1
City of Sierra Madre Regional Housing Needs Allocation

	Housing Units by Income Category (% of Los Angeles County Area Median Income)				
	Very Low (31-50%)	**Low (51-80%)**	**Moderate (81-120%)**	**Above Moderate (120% or more)**	**Total RHNA**
Units Needed	79	39	35	51	204
Source: City of Sierra Madre Draft 2021-2029 Housing Element					

One of the important steps in the Housing Element update process is to identify sites that can accommodate the housing units assigned to Sierra Madre per the above RHNA allocation table, at all income levels. In order to count toward the RHNA allocation, sites must be in a zoning category that meets

a minimum residential density standard, have a minimum lot size, and are either vacant or underutilized. Underutilized sites are those sites that have not been developed to the maximum capacity allowed by the zoning category and thus provide the potential for more residential homes on a site. When a local jurisdiction cannot demonstrate that there are enough vacant or underutilized sites to adequately meet their RHNA allocation, a 'rezoning program' must be put into place. A rezoning program ensures that there are enough sites with sufficient densities to address the housing need identified through the RHNA. Sierra Madre does not currently have an adequate number of sites with zoning in place to fulfill its RHNA obligations, and through a yearlong process with input both from the community and City decision-making bodies, has identified sites for rezoning to address this shortfall. The following methods will be used to address the City's regional housing needs:

1. Approved and pending residential projects
2. Provision of accessory dwelling units
3. Rezoning of opportunity sites to densities of 20 and 30 units/acre
4. Designation of identified congregational sites with a Religious Housing Overlay

Table III-2 provides a summary of the residential unit potential from the above methods and demonstrates the City's capacity to address its 2021-2029 RHNA.

Table III-2
Potential Housing Units During 2021-2029 Planning Period

Income Levels	Very Low	Low	Moderate	Above Mod	Total
2021-2029 RHNA Targets	**79**	**39**	**35**	**51**	**204**
Approved Projects (Stonegate)				27	27
Pending Projects (The Meadows)				42	42
Accessory Dwelling Units	28	54	2	36	120
Total Site Capacity	**82**		**2**	**105**	**189**
RHNA surplus/shortfall	**(36)**		**(33)**	**+54**	
Rezone Sites					
Multi-family Opportunity Sites	20		30	40	90
Congregations with RHO	121				121

Approved/Pending Residential Projects

Sierra Madre has two residential subdivisions in various stages of development entitlement that will contribute towards addressing its future RHNA needs, as described below. These sites are not required to fulfill the City's RHNA and are included here for informational purposes only. For the environmental analyses, these projects will be considered as part of the future environmental baseline and not as part of the project for the non-technical analyses. For the analysis of air quality, energy, greenhouse gases, noise, and transportation, these projects are included to present a worst case scenario.

- **Stonegate.** The One Carter hillside property at the northern terminus of North Baldwin Avenue has been subdivided into 27 residential lots and two undevelopable lots. The custom homes

being developed in Stonegate are subject to the City's Residential Hillside Management Zone, and the Stonegate Design Guidelines. As of April 2021, the City has received 24 applications for development, and has thus far approved seven homes for development.

- **The Meadows at Bailey Canyon.** The lower 20 acres of the 88-acre Mater Dolorosa Passionist Retreat Center is being proposed for development with 42 detached single-family dwellings and a 3 to 3.5 acre dedicated neighborhood park. An additional 45 acres of hillside open space north of the Retreat Center is to be dedicated to the City of Sierra Madre. The property is currently identified as an institutional land use in the General Plan, and is being proposed to be amended to include Open Space, Civic/City Park, Institutional, and One Family Residential (7,500 sq. ft. minimum) land use designations. The project is projected to go before City Council in August 2021, and is not part of the rezone program proposed under the Housing Element.

Accessory Dwelling Units

Accessory dwelling units (ADUs) are small, self-contained dwelling units that provide a kitchen, bathroom and sleeping area. The unit can be attached to the main home with a separate entrance or can be a small detached unit in the rear yard or above a garage. Because of their small size, ADUs typically rent for less than apartments, can provide affordable rental options for smaller households, and can provide rental income for the homeowner.

ADUs are becoming an integral segment of Sierra Madre's housing stock, with 26 applications and 12 building permits issued for ADUs in 2020 alone. Pursuant to AB 671, the Housing Element includes a new program to further incentivize the production of affordable ADUs, including elimination of development impact fees on ADUs <750 square feet; providing application fee waivers for units deed restricted for low and/or moderate income households; and providing reduced fees for ADUs that incorporate accessibility features. The City also plans to re-initiate an amnesty program for accessory dwelling units to bring existing units built illegally up to Code to make them safe and sanitary for current and future tenants.

Given Sierra Madre's track record in providing ADUs, combined with additional incentives, the sites inventory projects an average of 15 ADUs to be produced annually, or 120 over the 2021-2029 planning period. The projected affordability of these ADUs is based on SCAGs Regional Accessory Dwelling Unit Affordability Analysis (December 2020). The City will continue to monitor the extent of ADU production to ensure that the ordinance is being successful and that the Housing Element goals and RHNA production can be met.

Sites for Rezoning

The City has conducted extensive community outreach, meetings with City decisionmakers and discussions with property owners to identify those sites most suitable for rezoning to address the City's RHNA shortfall. Sites recommended for re-designation were selected based on several factors: existing land use and feasibility for redevelopment within the planning period; neighborhood compatibility and community context; property owner interest; and an overriding goal to disperse affordable housing opportunities throughout the community. The following describes the opportunity sites proposed for rezoning in the Housing Element.

Table III-3
Sites for Rezoning at 20-30 Units per Acre

Site No.	Site Description	Current Zoning	Proposed Zoning	Acres	Net Unit Potential
1	200 block Mariposa Avenue	R-2, R-3 R-3H	R-3-30	2.44	48
2	18-100 block Suffolk Avenue	R-3	R-3-20	2.81[1]	27
3	491 W. Sierra Madre Avenue	R-3	R-3-30	0.92	10
4	215 N. Baldwin Avenue	R-3	R-3-20	0.34	5
				Total Net Units	**90**

[1] Acreage reflects the entire are to be rezoned. Unit potential only includes those parcels assumed to redevelop during the planning period.

Site 1. Rezoning of nine properties on the 200 block of West Mariposa Avenue to R-3-30 (30 to 34 du/acre). Properties are currently developed with older single-family, duplex and fourplex units, ranging in age from 1895 to 1948. Most units are modest, with a low improvement to land value ratio and numerous units exhibiting deferred maintenance. The combined site consists of 25 existing units with a potential net gain of 48 units under the new R-3-30 zoning designation. Two of the parcels were identified as R3-H (20 units/acre) in the prior Housing Element, and therefore to carry over to the 2021-2029 Element, will allow 20 du/acre by-right for inclusion of 20% low-income units.

Site 2. Rezoning of ten properties to R-3-20 (20 to 24 du/acre) on Suffolk Avenue. Two of the parcels have been combined (93 Suffolk) and have an application for development with five apartments, including one restricted to moderate income households. Another property owner at 92 Suffolk has approached the City regarding potential lot consolidation and redevelopment with seven units of multi-family housing. Existing units identified for redevelopment range in age from 1902 to 1947, have a low improvement to land value ratio, and exhibit deferred maintenance. The combined site consists of 13 existing units with a potential net gain of 27 units under the new R-3-20 zoning designation.

Site 3. Rezoning of one property just under one acre fronting on West Sierra Madre Boulevard at the terminus of Park Avenue. The property is currently developed with the Park Avenue Apartments consisting of three buildings developed in 1960 with three to six units each, and a two-unit building constructed in 1935, for a total of seventeen units. The improvement to land value ratio is just 25%, rendering the site economically suitable for redevelopment. The site includes a large surface parking area and undeveloped open space area. The property owner has expressed an interest in potential higher density development on the site, either through infill or redevelopment.

Site 4. Designation of one property on the southwest corner of North Baldwin Avenue and West Laurel Avenue. The site is currently zoned R-3 (13 units/acre) and underdeveloped with an older (1947) single-family home. The improvement to land value ratio is just 30%. The property owner's architect has shared concept plans with the City to redevelop the site with six to seven units, potentially utilizing State density bonus incentives to achieve the extra unit.

Affordable Housing on Congregational Land

Inspired by proposed State legislation to allow affordable housing to be developed on congregational land, City staff began reaching out to pastors and religious leaders in the community in the fall of 2020 to explore the concept of adding an affordable housing overlay to Sierra Madre's religious sites. Several congregations have large parking areas and other underutilized land that, with the necessary zoning in place, could be used to build affordable housing and further the congregation's mission.

Four church sites were identified as having capacity and suitable conditions to accommodate housing. Conceptual site plans illustrating feasible affordable housing development concepts were prepared for each site and provided the basis for establishing development standards for the Overlay, summarized in Table III-4.

Projects may apply for development standards concessions as provided for in state density bonus law and the local Zoning Code, or they may take advantage of the preapproved concession menu shown in Table III-4, with no limit on the number of concessions permitted.

All residential development within the Religious Housing Overlay will be subject to the following affordability requirements:

- Rental housing: minimum 50% of units restricted to lower income households (up to 80% area median income) for 55 years
- Ownership housing: minimum 50% of units restricted to lower income households, or 90% of units restricted to moderate income households (up to 120% area median income) for 45 years

Table III-4
Religious Housing Overlay Zone Standards

Development Feature	Base Standard	Affordable Housing Concession Menu
Maximum density	42 units/acre	No Change
Parking[1] (uncovered, covered, or structured)	0-1 bdrm: 0.5 space/unit 2-3 bdrm: 1 space/unit 4+ bdrm: 2 spaces/unit	Allow off-site parking for residential, religious assembly, and school uses to be located within 600' of the use being served
Height	30 feet or 2 stories	35' or 3 stories[2]
Front setback	1st Floor: 15 feet 2nd Floor: 25 feet	1st, 2nd & 3rd floor: 15 feet Michillinda & Baldwin Avenues: feet'
Onsite open space	500 square feet	175 square feet

Source: City of Sierra Madre 2021-2029 Housing Element
[1] Parking requirements for church may be reduced by 50% to accommodate affordable housing. The number of church parking spaces available after completion of an affordable housing project can count towards the housing project's parking requirements.
[2] Development must be min. 40' away from any public street for increased height allowance, except on Michillinda and Baldwin Avenues.

Table III-5 presents the four sites to be designated with the Religious Housing Overlay Zone, along with their development capacities based on the standards presented in Table III-4.

Table III-5
Religious Housing Overlay Zone Sites

Site No.	Site Description	Current Zoning	Developable Acreage	Unit Potential
A	St. Rita Catholic Church & School	I	0.71	30
B	United Methodist Church	I	0.65	28
C	Old North Church	I	0.53	23
D	Bethany Church and School	I	0.93	40
			Total Net Units	121

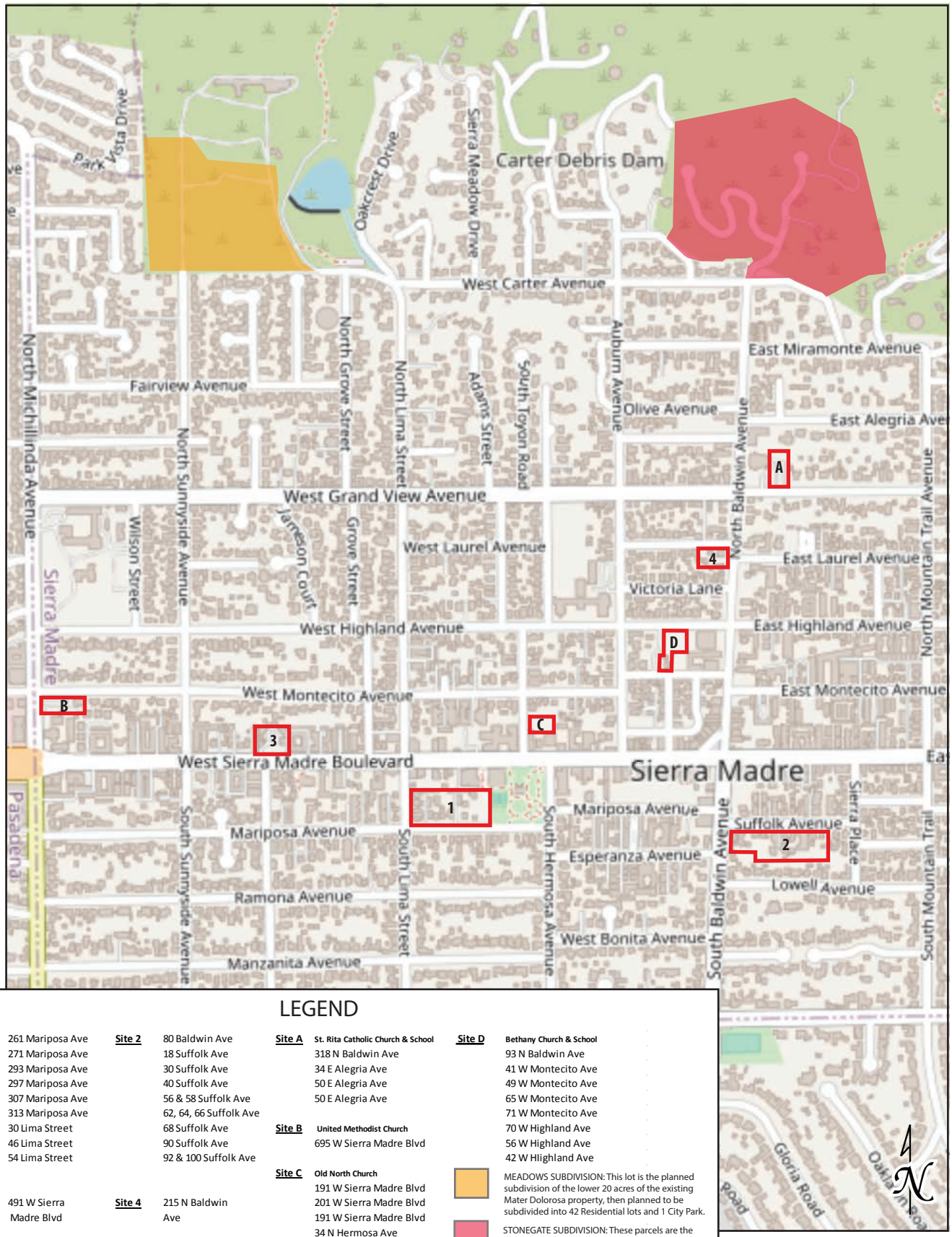
Figure III-2, Housing Element Opportunity Sites Map, shows the location of the proposed opportunity sites. Table III-6 provides information on the existing and proposed General Plan designations and zoning for the proposed opportunity sites.

i) Land Use Element

The Land Use Element of the General Plan will be updated to reflect new opportunity sites identified in the Housing Element. This will include establishing two new multi-family residential land use categories (R-3-20 and R-3-30), creating an Affordable Housing Overlay on select congregational sites, along with minor changes to the Land Use table and map to accommodate residential land uses on the opportunity sites identified to meet the RHNA allocation. The existing and proposed General Plan map is shown in Figures IIII-3, Existing General Plan Designations and Figure IIII-4, Proposed General Plan Designations. Proposed General Plan Land Use Element policies are shown in Section 3. Proposed General Plan Policies.

i) Safety Element

The purpose of the Safety Element Update is to ensure consistency with the Housing Element Update and to comply with recent State legislation and guidelines (including Assembly Bill 162, Senate Bill 1241, Senate Bill 99, Assembly Bill 747, Senate Bill 1035 and Senate Bill 379). Technical amendments will be made to the Safety Element to achieve compliance with State, regional, and local policies and guidelines. The technical amendments will incorporate data and maps, address vulnerability to climate change; and incorporate policies and programs from the City's Hazard Mitigation Plan. The Safety Element amendments will be submitted to the California Geological Survey, California Office of Emergency Services, California State Board of Forestry and Fire Protection, and Federal Emergency Management Agency for review. Proposed General Plan Safety Element policies are shown in Section 3. Proposed General Plan Policies.



LEGEND

Site 1	261 Mariposa Ave	**Site 2**	80 Baldwin Ave	**Site A**	**St. Rita Catholic Church & School**	**Site D**	**Bethany Church & School**
	271 Mariposa Ave		18 Suffolk Ave		318 N Baldwin Ave		93 N Baldwin Ave
	293 Mariposa Ave		30 Suffolk Ave		34 E Alegria Ave		41 W Montecito Ave
	297 Mariposa Ave		40 Suffolk Ave		50 E Alegria Ave		49 W Montecito Ave
	307 Mariposa Ave		56 & 58 Suffolk Ave		50 E Alegria Ave		65 W Montecito Ave
	313 Mariposa Ave		62, 64, 66 Suffolk Ave				71 W Montecito Ave
	30 Lima Street		68 Suffolk Ave	**Site B**	**United Methodist Church**		70 W Highland Ave
	46 Lima Street		90 Suffolk Ave		695 W Sierra Madre Blvd		56 W Highland Ave
	54 Lima Street		92 & 100 Suffolk Ave				42 W Hlighland Ave
				Site C	**Old North Church**		
					191 W Sierra Madre Blvd		
Site 3	491 W Sierra Madre Blvd	**Site 4**	215 N Baldwin Ave		201 W Sierra Madre Blvd		
					191 W Sierra Madre Blvd		
					34 N Hermosa Ave		
					40 N Hermosa Ave		

MEADOWS SUBDIVISION: This lot is the planned subdivision of the lower 20 acres of the existing Mater Dolorosa property, then planned to be subdivided into 42 Residential lots and 1 City Park.

STONEGATE SUBDIVISION: These parcels are the completed subdivision of the One Carter property to 27 Residential lots and 2 undevelopable lots.

Source: OpenStreetMaps, March 2021.

Figure III-2
Housing Element Opportunity Sites Location Map

Table III-6
Proposed Housing Element General Plan Amendment and Rezone Sites

Map ID	Address	Site Acreage	Existing General Plan	Proposed General Plan	Existing Zoning	Proposed Zoning	Net D/U Capacity Potential
1	200 block Mariposa Avenue	2.44	Residential High Density-13 du/acre (1.64 ac) Residential High Density-20 du/acre (0.8 ac)	Residential High Density-30 du/acre	R-2, R-3, R-3H	R-3-30	48
2	18-100 block Suffolk Avenue	2.81	Residential High Density-13 du/acre	Residential High Density- 20 du/acre	R-3	R-3-20	27
3	491 W. Sierra Madre Avenue	0.92	Residential High Density-13 du/acre	Residential High Density-30 du/acre	R-3	R-3-30	10
4	215 N. Baldwin Avenue	0.34	Residential High Density-13 du/acre	Residential High Density-20 du/acre	R-3	R-3-20	5
A	St. Rita Catholic Church & School	0.71	I	Religious Housing Overlay	I	RHO 32-35 du/ac	30
B	United Methodist Church	0.65	I	Religious Housing Overlay	I	RHO 32-35 du/ac	28
C	Old North Church	0.53	I	Religious Housing Overlay	R-3, C	RHO 32-35 du/ac	23
D	Bethany Church and School	0.93	I	Religious Housing Overlay	I	RHO 32-35 du/ac	40
						Total Units	**211**

Source: City of Sierra Madre 2021-2029 Housing Element Tables IV-2 and IV-4, City of Sierra Madre General Plan Map and Zoning Map

RHO = Religious Housing Overlay
C = Commercial
HM = Hillside Management
H = Hillside
I = Institutional
RH = Residential Medium/High Density
RL = Residential Low Density
R-1 = One Family Residential
R-2 = Two Family Residential
R-3 = Multiple Family Residential

ii) Circulation Element

Minor updates to the Circulation Element include updates to reflect current conditions and a policy related to the City's adopted vehicle miles traveled (VMT) thresholds as a metric to evaluate environmental impacts of proposed projects. Vehicle miles traveled evaluates the number of miles traveled by each vehicle. This shift in standard is mandated by the State as part of Senate Bill 375 in keeping with the State's goals to reduce greenhouse gas emissions, encourage infill development and improve public health through active transportation (e.g., bicycling and walking). Proposed General Plan Circulation Element policies are shown in Section 3. Proposed General Plan Policies.

iii) Rezoning

Housing Element statutes provide for the use of "default densities" to assess affordability when evaluating the adequacy of sites to address the affordability targets established by the RHNA. Based on its population and location within Los Angeles County, Sierra Madre falls within the default density of a minimum 20 units per acre for providing sites affordable to very low- and low-income households. The City is in the process of developing two new multi-family zoning categories for the rezone sites which meet this minimum default density: R-3-20 will provide for densities of 20-24 units/acre, and R-3-30 will provide for densities of 30-34 units per acre. The City intends to adopt the new zoning designations in conjunction with the Housing Element and rezoning of the designated properties.

Therefore, in addition to requiring General Plan amendments, Opportunity Sites 1-4 and A-D will require rezoning to accommodate the City's RHNA goals. The proposed rezoning for the sites is shown in Table III-6. The existing and proposed zoning map is shown in Figures III-5, Existing Zoning and III-6, Proposed Zoning.

3. PROPOSED GENERAL PLAN POLICIES

The following policies are proposed as amendments to the City of Sierra Madre General Plan. ~~Strikeout~~ shows text deletions. New text is shown as <u>underline</u>.

A. Circulation Policies

The following policy is proposed for Chapter One – Land Use, Section Five: Circulation.

<u>Objective L57: Transportation Environmental Evaluation</u>

<u>Policies:</u>

<u>L57.1 Each new project must be evaluated against the "Vehicle Miles Traveled" Baselines and Thresholds of Significance adopted June9th, 2020 by the City Council.</u>

B. Land Use Policies

The following policies are proposed as amendments to Chapter One – Land Use, Section One: Land Use Designations

~~Residential Medium/~~High Density (Map designations RH-13, RH-20, RH-30)

Objective L23: Allowing the continued development of multiple family units in areas which are characterized by multiple family structures.

Policies:

L23.1 Allow for densities of ~~approximately~~ 13 units per acre (RH-13), 20-24 units per acre (RH-20) and 30 units per acre (RH-30).

L23.2 In the RH-13 land use district, ~~E~~ensure that on small or narrow lots (lot area less than 10,000 square feet or street frontage of less than 50 feet), the floor area of all above-ground buildings and structures (including garages and other non-habitable areas, but excluding basements and other fully subterranean spaces) is limited to 55% of lot area. On other lots, limit floor area of all above-ground buildings and structures (including garages and other non- habitable areas, but excluding basements and other fully subterranean spaces) to 5,500 square feet plus 70% of lot area in excess of 10,000 square feet.

Religious Housing Overlay (Map designation RHO)

Objective L46: Allowing religious institutions to carry out their mission by supporting the provision of affordable housing on congregational land in conjunction with continuation of the existing religious use.

Policies:

L 46.1 Establish a Religious Housing Overlay Zone to allow for housing by-right on designated congregational land that incorporates either: a) a minimum 50% of rental units affordable to lower income households; or b) a minimum 90% of ownership units affordable to moderate income households.

L 46.2 Adopt pre-approved development concessions for parking, height, setbacks and open space to facilitate use of the overlay and development feasibility.

L 46.3 Support collaborative partnerships between religious institutions and affordable housing developers, and assist in accessing affordable housing funds.

L 46.4 Allow adaptive reuse of code-compliant buildings on congregational land for residential use.

Figure 1-2 is amended as follows:

Figure 1-2 Land Use Chart

LAND USE CATEGORY	HEIGHT (FEET)/ NO. OF STORIES	MAXIMUM DENSITY/FLOOR AREA RATIO
RL (Residential Low Density)	25 / 2 stories	1 dwelling units/lot
RC (Residential – Canyon)	25 / 2 stories	1 dwelling units/lot
H (Hillside)	25 / 2 stories	1 dwelling units/lot
RM (Residential Medium Density)	30 / 2 stories	2 dwelling units/lot
RH-13 (Residential ~~Medium/~~High Density)	30 / 2 stories	13 dwelling units/acre
RH-~~1~~20 (Residential ~~Medium/~~High Density)	30 / 2 stories	20 - 24 dwelling units/acre
RH-30 (Residential High Density)	35 / 3 stories	30 - 34 dwelling units/acre
RE (Residential Entrepreneur Overlay)	30 / 2 stories	13 dwelling units/acre
C (Commercial)	30 / 2 stories	13 dwelling units/acre 1.0 FAR
AMU (Artisan Mixed Use)	30 / 2 stories	13 dwelling units/acre 1.0 Floor Area Ratio
I (Institutional)	Established by Master Plan	Established by Master Plan
Measure V boundary area	30 / 2 stories	13 dwelling units/acre
M (Municipal Government)	n/a	n/a
COS (Constructed Open Space)	n/a	n/a
NOS (Natural Open Space)	n/a	n/a
RHO Religious Housing Overlay)[1]	30 / 3 stories	42 dwelling units/acre

[1] Projects meeting the affordability requirements of the Overlay may apply for development standard concessions under State density bonus law, or may take advantage of the City's pre-approved affordable housing concessions.

The amendments to the General Plan also include the proposed Land Use Designation Map. The map changes are shown in Figure III-4.

C. Safety Policies

The following policies are proposed as amendments to Chapter Three – Hazard Prevention, Section One: Fire Safety, Section Two: Flood/Landslide, and Section Three: Seismic Safety. New sections and policies have been added to the General Plan including Section Five: Multi-Hazards, Section Six: Windstorms, and Section Seven: Utility Safety.

The proposed amendments include policies included in the City's January 11, 2020 Hazard Mitigation Plan that would be incorporated into the General Plan Safety Element and new goals and policies added to update the Safety Element to respond to wildfire response and management.

Hazard Mitigation Plan Policies

The following policies would be incorporated from the City's Hazard Mitigation Plan. The Hazard Mitigation Plan policy number is included in parathesis and would be included in the General Plan to reference back to the Hazard Mitigation Plan.

Hz2.11 Enhance emergency services to increase the efficiency of wildfire response and recovery activities through purchase of a Type 5 Vehicle. (HMP WF-1)

Hz5.5 Develop a Vegetation Management Program. (HMP WF-7)

Hz5.a.1 Enhance outreach and education programs (e.g. CAL FIRE, Vegetation Management) aimed at mitigating wildfire hazards. (HMP WF-4)

Hz5.a.2 Maintain contemporary collection of maps relating to the fire hazard to help educate and assist builders and homeowners in mitigating against wildfire. (HMP WF-3)

Hz5.b.1 Enhance outreach and education programs (e.g. CAL FIRE, Vegetation Management) aimed at mitigating wildfire hazards. (HMP WF-4)

Hz5.b.2 Maintain contemporary collection of maps relating to the fire hazard to help educate and assist builders and homeowners in mitigating against wildfire. (HMP WF-3)

Hz6.3 Improve knowledge of landslide hazard areas and understanding of vulnerability and risk to life and property in hazard- prone areas. (HMP LND-1)

Hz6.4 To the extent feasible, provide protective measures designed to limit debris flow resulting from the fire/mudflow sequence, thereby reducing the threat to life and property relative to existing development in threatened areas including debris basins enhancements, and property purchases. (HMP LND-6)

Hz6.5 Amend Hillside Management Zone. (HMP LND-7)

Hz8.4 Identify surface water drainage obstructions for all parts of the City of Sierra Madre. (HMP FLD-2)

Hz8.5 Capture flood waters to lessen the flow within the City streets. (HMP FLD-3)

Hz9.3 Work with the National Flood Insurance Program (NFIP) to have the FIRM updated for the project area. (HMP FLD-12)

Hz 13.4 Utilize contemporary seismic maps during plan/permit review process. (HMP EQ-1)

Hz 13.5 Incorporate the Regional Earthquake Transportation Evacuation Route updated developed by the Area D Disaster Management Area Coordinators into the Emergency Operations Plan. (HMP EQ-2)

Hz 13.6 Identify funding sources for structural and non-structural retrofitting of City-owned structures that are seismically vulnerable (e.g. City Library). (HMP EQ-3)

Hz 13.7 Encourage purchase of earthquake hazard insurance for private properties and uninsured City-owned properties. (HMP EQ-4)

Hz 13.8 Encourage hazard reduction with non- structural and structural earthquake retrofits and other strategies in homes, businesses, and City facilities. (HMP EQ-6)

Hz 13.9 Replace water mains in fault zones with seismic pipe thereby maintaining water system integrity and reducing the threat to life and properly loss by providing fire suppression. (HMP EQ-7)

Hz 13.10 Renovate main booster plant with new booster pumps and control panels thereby ensuring reliable water delivery to City's distribution system. (HMP EQ-8)

Hz 13.11 Seismically retrofit the Auburn reservoir; thereby preserving stored water for domestic use and fire suppression. (HMP EQ-9)

Hz17.1 Integrate the goals and action items from the City of Sierra Madre Hazard Mitigation Plan into existing regulatory documents and programs, where appropriate. (HMP MH-1)

Hz17.2 Identify and pursue funding opportunities to develop and implement neighborhood and city mitigation activities. (HMP MH-2)

Hz17.3 Develop inventories of Unreinforced Masonry Buildings and Soft-Story Structures. (HMP MH-6)

Hz17.4 Buy Vactor to pneumatically collect liquids, sludges, slurries, sewage or other spills from a location thereby reducing the threat of exposure to hazardous spills. (HMP MH-10)

Hz18.1 Develop Public Awareness Campaign: To provide public education materials to City residents pertaining to the protection of life and property before, during, and after a windstorm. (HMP WND-1)

Hz18.2 Create local City awareness of tree appropriateness in regard to the Fire Code Sections relevant to utility operations. (HMP WND-2)

Hz18.3 Encourage property owners and Critical Facilities to purchase and/or test backup power facilities for use during a power failure. Create an equipment/testing log to ensure backup power equipment is in working service. (HMP WND-3)

Hz19.1 Install Public Safety protective shut-offs for power. (HMP UT-1)

Hz19.2 Prepare public and emergency services for Public Safety Power Shutoffs (PSPS) by providing back-up generators for critical City facilities and at-risk members of the community. Pursue solar power and energy storage as alternative sources of power during PSPS events for critical City facilities. (HMP UT-2)

Hz19.3 Secure adequate water surplus and sources during drought years to meet demands of public health and safety and emergency response. (HMP UT-3)

Hz19.4 Identify alternative sources of water and distribution capabilities in the event of a system-wide contamination emergency. (HMP UT-4)

Hz19.5 Make necessary upgrades to sewer infrastructure and overflow response actions to prevent major sewer overflows. (HMP UT-2)

New Goals and Policies

The following goals and polices amendments are proposed for the Safety Element.

Hz 2.12 All new residential developments in hazard areas shall have at least two emergency evacuation routes (i.e., points of ingress and egress)

Hz2.13 After any large fire, redevelopment shall be re-evaluated.

Hz4.7 Regularly review City evacuation routes for capacity, safety, and viability under a range of emergency scenarios.

Objective Hz5.a: Limit risk of wildfire through public education and development planning.

Objective Hz7: Avoid expanding development into undeveloped areas in Very High Fire Severity Zones.

Hz7.3 Locate, when feasible, new essential public facilities outside of flood hazard zones, including hospitals and health care facilities, emergency shelters, fire stations, emergency command centers, and emergency communications facilities.

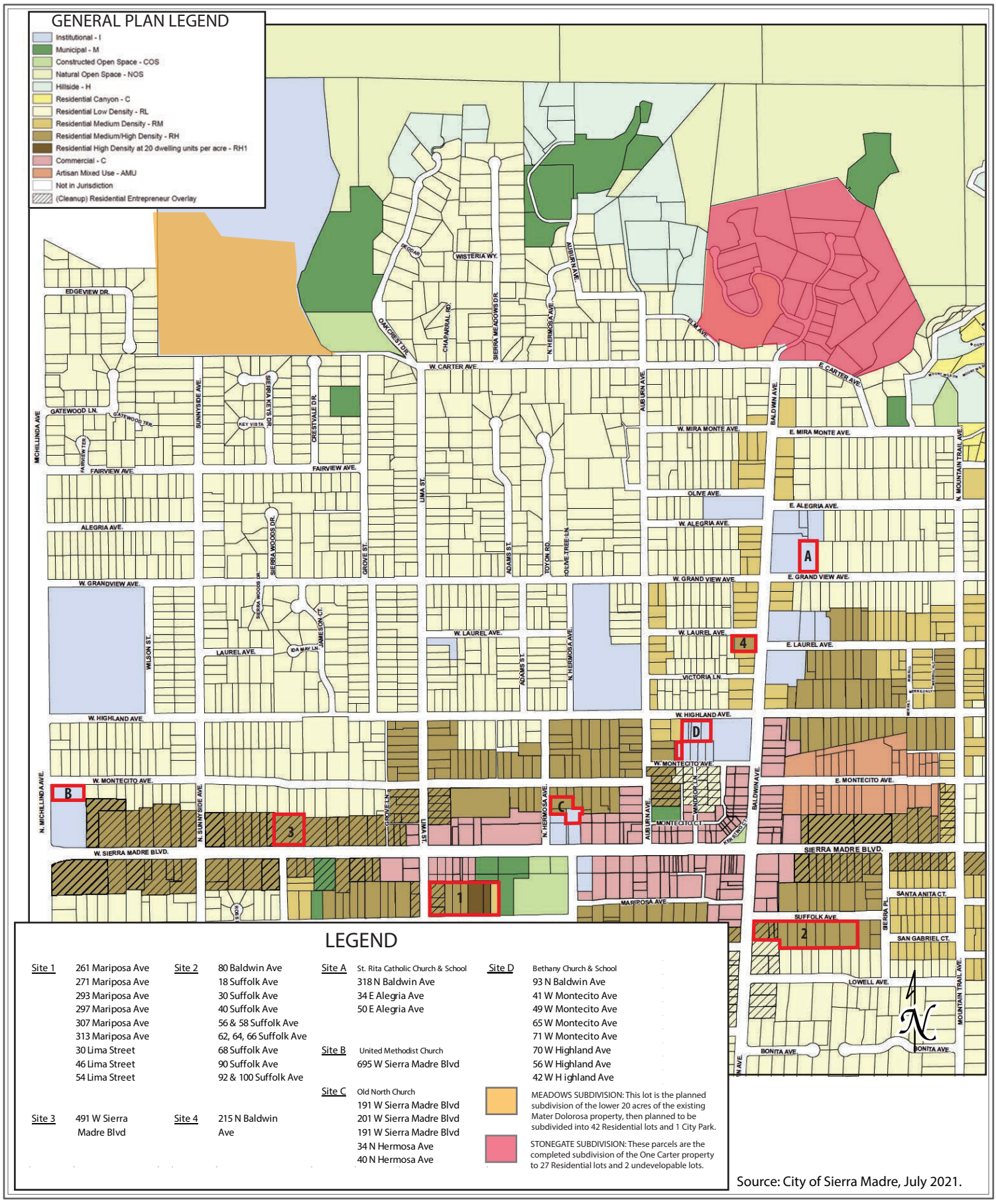
Hz7.4 Establish cooperative working relationships among public agencies with responsibilities for flood protection.

Hz 13.3 Adopt a wood soft first-story ordinance and program to retrofit potentially vulnerable buildings.

Objective Hz17: Take steps that address multi-hazards in the City.

Objective Hz18: Reduce the potential impact of windstorms that can cause injury, loss of life, structural and infrastructure damage through education, awareness, and preparation.

Objective Hz19: Reduce risk of injury, loss of life, and disruption or damage of public infrastructure and increase utility safety, security, and adequacy through monitoring and infrastructure upgrades.



LEGEND

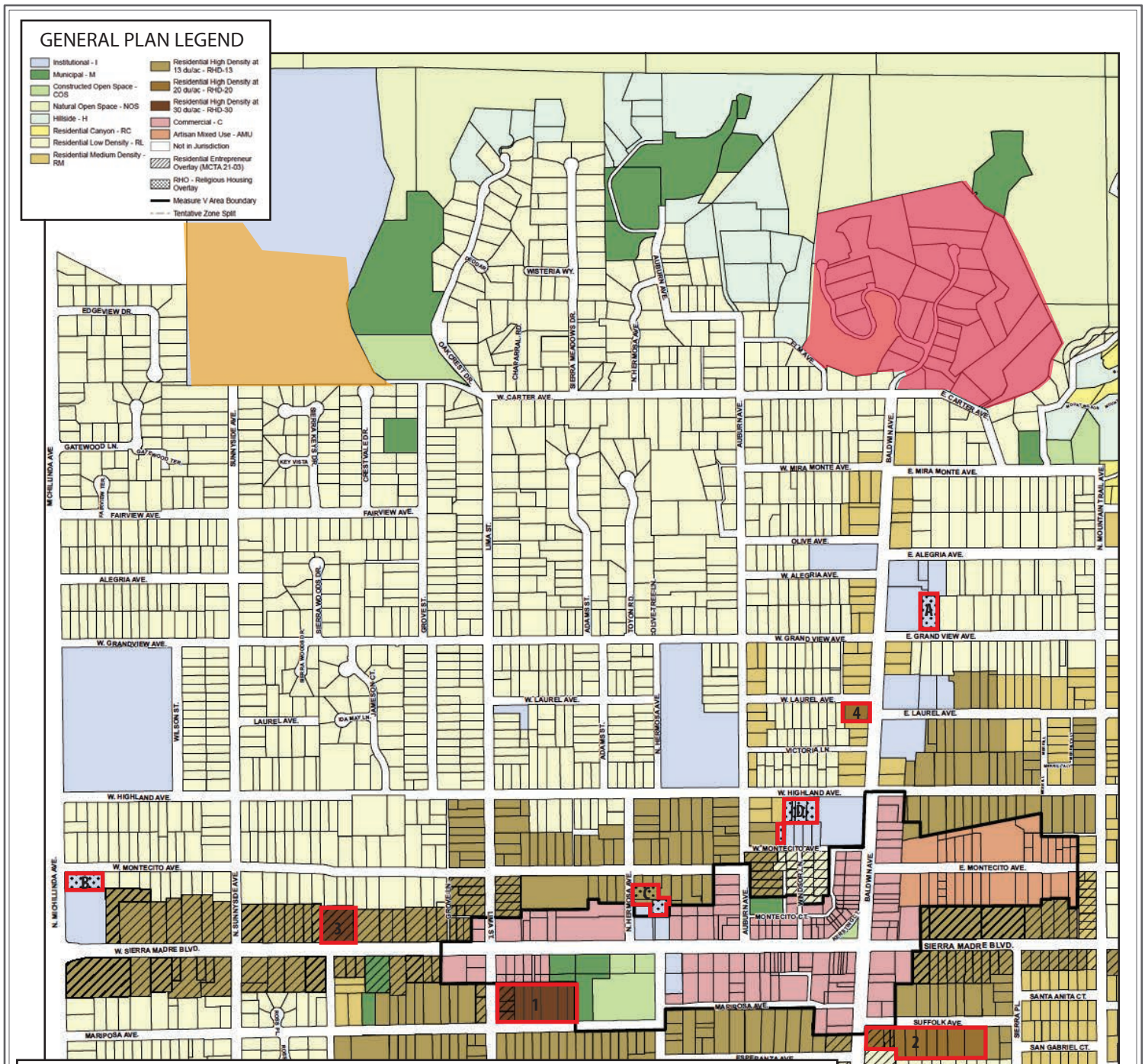
Site 1	261 Mariposa Ave 271 Mariposa Ave 293 Mariposa Ave 297 Mariposa Ave 307 Mariposa Ave 313 Mariposa Ave 30 Lima Street 46 Lima Street 54 Lima Street	Site 2	80 Baldwin Ave 18 Suffolk Ave 30 Suffolk Ave 40 Suffolk Ave 56 & 58 Suffolk Ave 62, 64, 66 Suffolk Ave 68 Suffolk Ave 90 Suffolk Ave 92 & 100 Suffolk Ave	Site A	St. Rita Catholic Church & School 318 N Baldwin Ave 34 E Alegria Ave 50 E Alegria Ave	Site D	Bethany Church & School 93 N Baldwin Ave 41 W Montecito Ave 49 W Montecito Ave 65 W Montecito Ave 71 W Montecito Ave 70 W Highland Ave 56 W Highland Ave 42 W H ighland Ave
Site 3	491 W Sierra Madre Blvd	Site 4	215 N Baldwin Ave	Site B	United Methodist Church 695 W Sierra Madre Blvd		
				Site C	Old North Church 191 W Sierra Madre Blvd 201 W Sierra Madre Blvd 191 W Sierra Madre Blvd 34 N Hermosa Ave 40 N Hermosa Ave		

MEADOWS SUBDIVISION: This lot is the planned subdivision of the lower 20 acres of the existing Mater Dolorosa property, then planned to be subdivided into 42 Residential lots and 1 City Park.

STONEGATE SUBDIVISION: These parcels are the completed subdivision of the One Carter property to 27 Residential lots and 2 undevelopable lots.

Source: City of Sierra Madre, July 2021.

Figure III-3
Existing General Plan Designations



LEGEND

Site 1	261 Mariposa Ave 271 Mariposa Ave 293 Mariposa Ave 297 Mariposa Ave 307 Mariposa Ave 313 Mariposa Ave 30 Lima Street 46 Lima Street 54 Lima Street	Site 2	80 Baldwin Ave 18 Suffolk Ave 30 Suffolk Ave 40 Suffolk Ave 56 & 58 Suffolk Ave 62, 64, 66 Suffolk Ave 68 Suffolk Ave 90 Suffolk Ave 92 & 100 Suffolk Ave	Site A	St. Rita Catholic Church & School 318 N Baldwin Ave 34 E Alegria Ave 50 E Alegria Ave	Site D	Bethany Church & School 93 N Baldwin Ave 41 W Montecito Ave 49 W Montecito Ave 65 W Montecito Ave 71 W Montecito Ave 70 W Highland Ave 56 W Highland Ave 42 W H ighland Ave
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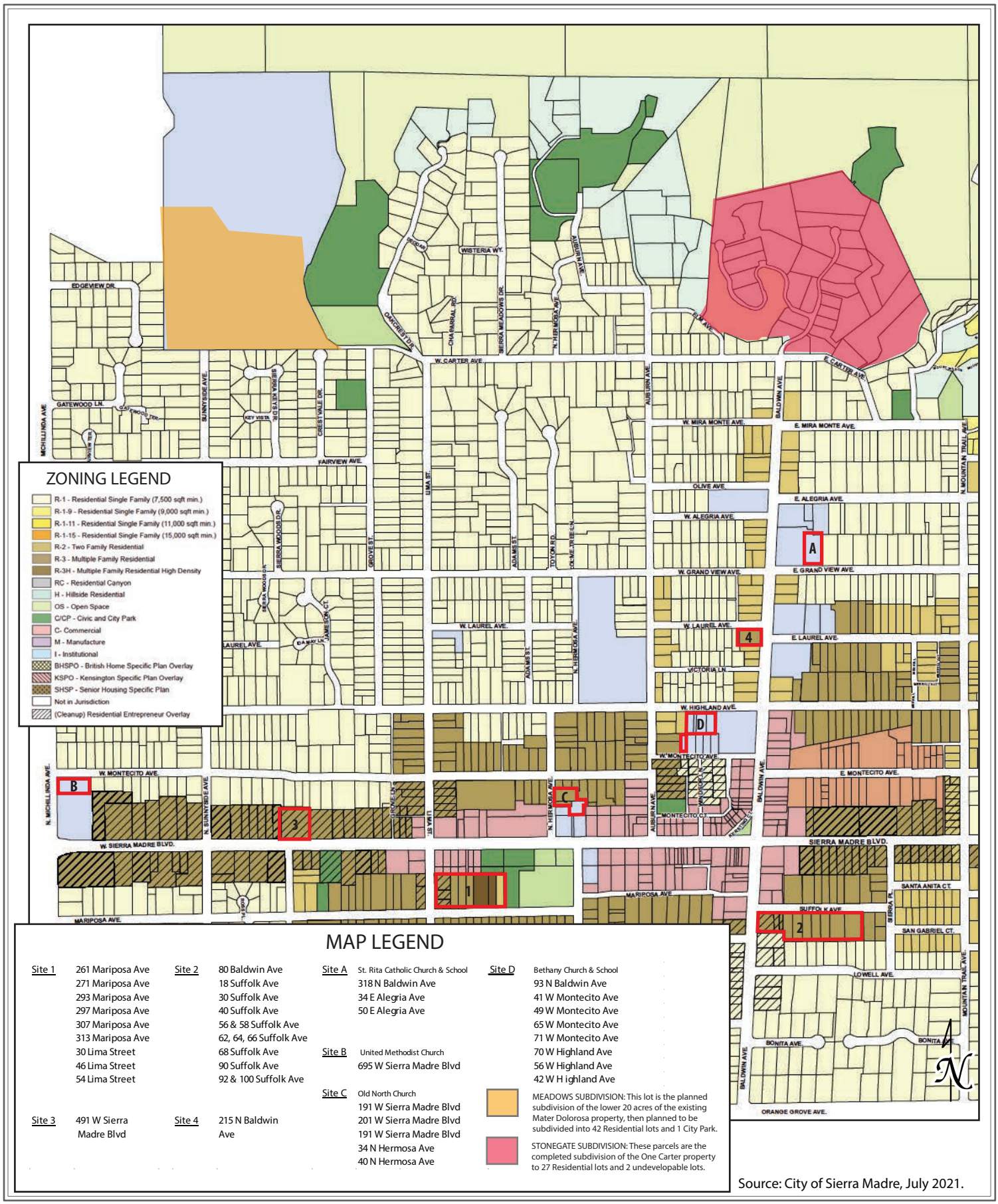
Source: City of Sierra Madre, July 2021.

Figure III-4
Proposed General Plan Designations



MAP LEGEND

Site 1
261 Mariposa Ave
271 Mariposa Ave
293 Mariposa Ave
297 Mariposa Ave
307 Mariposa Ave
313 Mariposa Ave
30 Lima Street
46 Lima Street
54 Lima Street

Site 2
80 Baldwin Ave
18 Suffolk Ave
30 Suffolk Ave
40 Suffolk Ave
56 & 58 Suffolk Ave
62, 64, 66 Suffolk Ave
68 Suffolk Ave
90 Suffolk Ave
92 & 100 Suffolk Ave

Site 3
491 W Sierra Madre Blvd

Site 4
215 N Baldwin Ave

Site A St. Rita Catholic Church & School
318 N Baldwin Ave
34 E Alegria Ave
50 E Alegria Ave

Site B United Methodist Church
695 W Sierra Madre Blvd

Site C Old North Church
191 W Sierra Madre Blvd
201 W Sierra Madre Blvd
191 W Sierra Madre Blvd
34 N Hermosa Ave
40 N Hermosa Ave

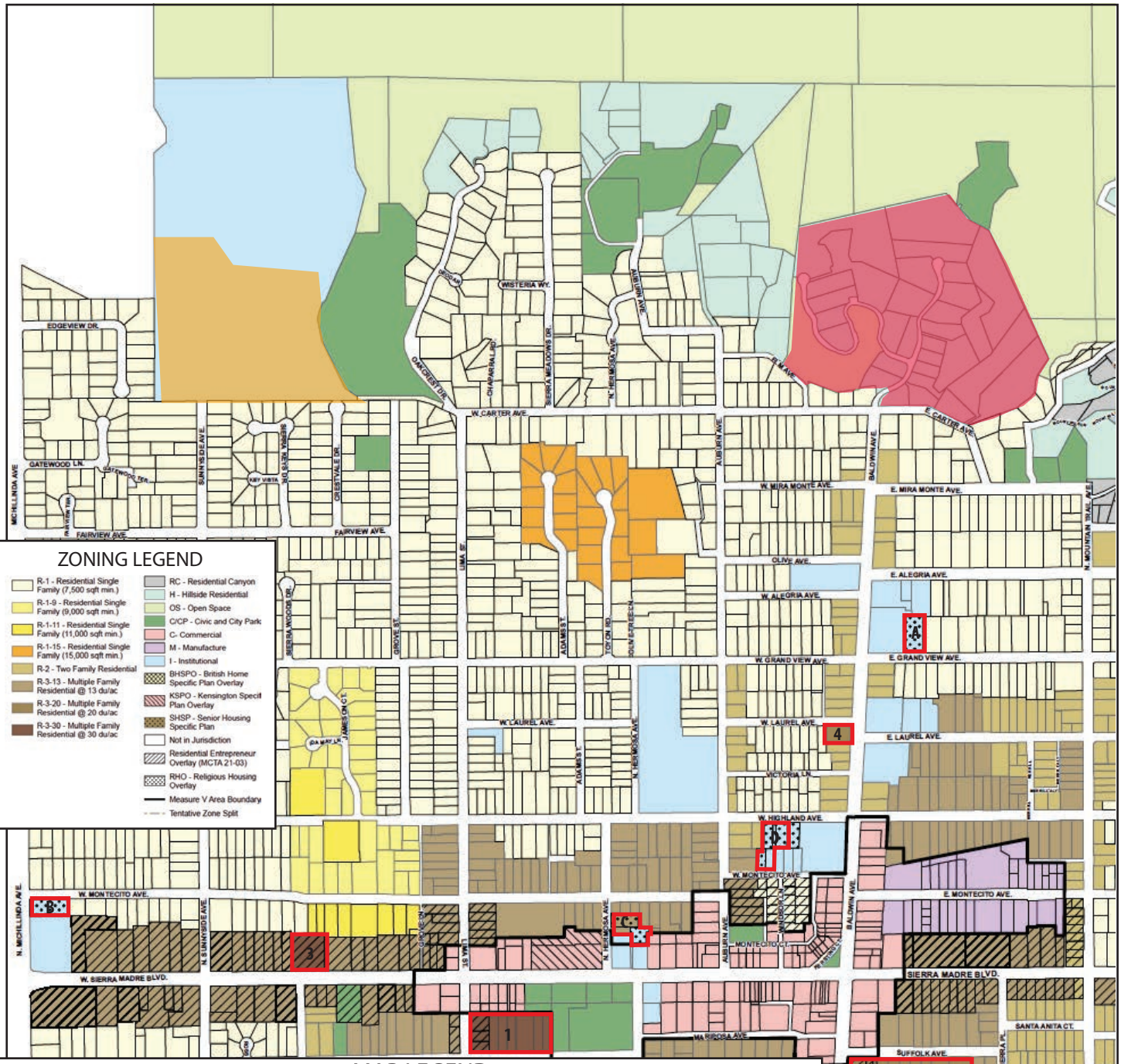
Site D Bethany Church & School
93 N Baldwin Ave
41 W Montecito Ave
49 W Montecito Ave
65 W Montecito Ave
71 W Montecito Ave
70 W Highland Ave
56 W Highland Ave
42 W H ighland Ave

MEADOWS SUBDIVISION: This lot is the planned subdivision of the lower 20 acres of the existing Mater Dolorosa property, then planned to be subdivided into 42 Residential lots and 1 City Park.

STONEGATE SUBDIVISION: These parcels are the completed subdivision of the One Carter property to 27 Residential lots and 2 undevelopable lots.

Source: City of Sierra Madre, July 2021.

Figure III-5
Existing Zoning Designations



MAP LEGEND

Site 1
261 Mariposa Ave
271 Mariposa Ave
293 Mariposa Ave
297 Mariposa Ave
307 Mariposa Ave
313 Mariposa Ave
30 Lima Street
46 Lima Street
54 Lima Street

Site 2
80 Baldwin Ave
18 Suffolk Ave
30 Suffolk Ave
40 Suffolk Ave
56 & 58 Suffolk Ave
62, 64, 66 Suffolk Ave
68 Suffolk Ave
90 Suffolk Ave
92 & 100 Suffolk Ave

Site 3
491 W Sierra Madre Blvd

Site 4
215 N Baldwin Ave

Site A
St. Rita Catholic Church & School
318 N Baldwin Ave
34 E Alegria Ave
50 E Alegria Ave
50 E Alegria Ave

Site B
United Methodist Church
695 W Sierra Madre Blvd

Site C
Old North Church
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Source: City of Sierra Madre, July 2021.

Figure III-6
Proposed Zoning Designations

4. PROJECT OBJECTIVES

Section 15124(b) of the California Environmental Quality Act (CEQA) Guidelines requires that a statement of objectives for the project includes the underlying purpose of the project.

The major objectives for the proposed project are as follows:

- Preserve and sustain Sierra Madre's distinctive character as a historic small town nestled in the foothills, but within a major metropolitan area.
- Ensure that Sierra Madre is a safe, vibrant place to live, work and visit by providing city services that match the needs of the community and promote community engagement.
- Protect and be responsible stewards of the neighboring San Gabriel Mountain foothill's wildlife, forest, open space, watershed and all other natural resources.
- Promote and develop a strong, diversified local economy and a thriving town center, consistent with the needs of the community.
- Ensure development is done in harmony with its neighborhood, while maintaining the character of the town and without unduly burdening existing city services and infrastructure or impacting the environment.

5. REQUESTED ACTIONS

Consistent with CEQA Guidelines Section 15065 (b), the City of Sierra Madre (the City) is the lead agency for the proposed project. As such, this SEIR will be used by the City to both evaluate the potential environmental impacts that would result from the proposed project and adopt mitigation measures ,as required, in the SEIR. The City Council will consider approval of the project as part of the City's environmental review process and would certify the project's Final EIR concurrently with project approval. The City will take the following actions:

- Certification of the SEIR;
- Adoption of the General Plan amendments to update the Housing Element;
- Adoption of General Plan Land Use Element policies and Map;
- Adoption of General Plan amendments to the Safety Element;
- Adoption of General Plan amendments to the Circulation Element; and
- Adoption of Zoning Code amendments.

IV. ENVIRONMENTAL IMPACT ANALYSIS
A. AESTHETICS

1. INTRODUCTION

This section of the EIR analyzes the potential environmental effects on aesthetic and visual impacts from implementation of the proposed project. Data for this section were taken from the City of Sierra Madre Municipal Code and City of Sierra Madre General Plan Update (2015).

A. 2015 General Plan EIR Analysis and Conclusions

The 2015 General Plan EIR determined that there would be no adverse impacts on scenic vistas as growth and development (e.g., infill development, redevelopment, and revitalization/restoration) that would occur within the City's infill opportunity sites, which include mostly underutilized parcels in various areas of the City. The development potential under the General Plan Update would concentrate on redevelopment efforts of underutilized parcels and the replacement or expansion of existing development mostly in the foothill areas of the City and not the hillside areas. The General Plan EIR determined that there would be no impact to state scenic highways as there are no state-designated or eligible scenic highways in Sierra Madre.

The 2015 General Plan DEIR found that the General Plan Update would not substantially degrade the existing visual quality and character of the City as Sierra Madre is almost entirely built out, new or revised policies, land use changes, and other components of the proposed General Plan Update were not anticipated to dramatically alter the character or visual quality of the community. The majority of the development potential of the General Plan Update would occur in areas of the City that are already developed; therefore, the proposed land use changes would not result in a substantial cumulative change or degradation of visual character in these areas.

Lastly, the 2015 General Plan EIR found that because the City and surrounding area are largely developed, the lighting associated with improvements and structures of future development that would be accommodated by the General Plan Update would not substantially increase nighttime lighting and glare in Sierra Madre or its surroundings. Development activities on the infill opportunity sites are not anticipated to generate more nighttime lighting or glare than that which is already present on or near these sites. Furthermore, all future development projects that would be accommodated by the General Plan Update would be required to comply with California's Building Energy Efficiency Standards for Residential and Nonresidential Buildings, Title 24, Part 6, of the California Code of Regulations, which outlines mandatory provisions for lighting control devices and luminaires and would be required to comply with the City's Title 17(Zoning) of the City's Municipal Code, including the lighting provisions outlined in Section 17.28.250 (Lighting) of Chapter 17.28 (Multiple Family Residential Zone) and Section 17.36.160 (Lighting) of Chapter 17.36 (Commercial Zone).

2. ENVIRONMENTAL SETTING

A. Existing Setting

1) *Citywide*

Character and Land Use

The City of Sierra Madre encompasses 1,882 acres (2.94 square miles). Sierra Madre is a bedroom community, comprised primarily of single-family residential neighborhoods. The City's architecture and downtown consisting of one- and two-story commercial buildings contribute to its "village center" character. Although located within the larger Los Angeles metropolitan area, there are no freeways within Sierra Madre's limits. The nearest major transportation corridor to the City is Interstate 210 (I-210), which runs in an east-west direction through Arcadia approximately one-half mile south of the Sierra Madre limits.

There are three distinct geographic patterns/areas in the City—the foothill slope, canyon (known as the Sierra Madre Canyon or The Canyon), and hillside. Two-thirds of the City is within the foothill slope area, which is the "developable" area of the City and is largely developed. Land uses in the City can be seen as organized along/within these three geographic patterns/areas. As shown in Figure III-3, Existing Land Use Designations, the predominant land use in the City is residential, consisting of low, medium, and medium-high density residential. The majority of low- and medium-density residential occurs in the foothill slope area; however, there is some low- and medium-density residential within the canyon and along the hillside areas. The majority of the medium-high density residential is located around the downtown area near Baldwin Avenue, Sierra Madre Boulevard, and adjacent streets.

The canyon area, which extends from North Mount Wilson Trail to the upper eastern reaches of Sturtevant Drive, has its own unique architectural style. This area is more rural and rustic in character, and primarily residential and recreational. While there are some residential uses, the hillside area also contains most of the City's open space, including approximately 120 of the 1,100 acres of Bailey Canyon Wilderness Park, which is owned by the County of Los Angeles but operated by the City.

Other land uses in the City include commercial, light manufacturing, mixed use, institutional, civic uses, public schools, and open space and parks. Most institutional/civic/park uses, as well as the City's open space areas, occur north of Sierra Madre Boulevard. Open space is the most prominent nonresidential land use, with institutional uses making up the third largest area of land. Institutional uses are generally mixed within the residential and commercial areas. Most institutional uses are older and well established in the City. All of the City's commercial uses (e.g., retail, professional office, and neighborhood services) are in the downtown area of the City, concentrated along Sierra Madre Boulevard, Baldwin Avenue, and adjacent smaller streets. There are a few mixed-use parcels consisting of both residential and commercial uses in and around the City's downtown area, mostly on Sierra Madre Boulevard and Baldwin Avenue. There is also an older well-established light manufacturing area in the City along East Montecito Avenue, which includes a mix of single-family residences; warehouses, office spaces, artist studios, and one complex of live-work condominiums.

Visual and Scenic Resources

Sierra Madre is known for its scenic backdrop of the southern foothills of the rugged San Gabriel Mountains, with elevations ranging from 1,000 to 2,100 feet above mean sea level. Generally, the terrain north of the foothills within the City's boundary is very steep and rugged, while the terrain to the south is

gently sloping. The foothills possess a high degree of aesthetic value with the hillsides and ridgelines being the most prominent visual features. Additionally, other significant features of the natural vegetation and topography, such as swales, knolls and rock outcroppings, contribute to the aesthetic quality of the foothills. Views of these features are afforded from various viewpoints throughout the City and outside the City's boundaries. Native oak and other native and ornamental trees are dominant features of Sierra Madre's landscape, which includes tree-lined streets, public and private spaces and properties, and parks and open space. The City's abundance of trees significantly enhances the visual quality of the community and promotes a welcoming environment. The Sierra Madre Canyon should also be noted for the unique infrastructure that is character-defining to the area including the rock walls, narrow winding roads, dam and wash, and other "non-suburban" features that distinguish this area and are important visual and scenic attributes.

While there is no dominant architectural style in Sierra Madre, residents are easily able to discern structures that embody the City's long history of architectural eclecticism. Architectural diversity has thus become Sierra Madre's distinguishing visual feature, adding to the unique feel of the City, especially noticeable in its downtown area. The downtown area, which begins east of Lima Street and continues east to the east side of Baldwin Avenue and from south of Mariposa Avenue up Baldwin Avenue to Highland Avenue, can be described as a "village center", characterized by one- and two-story commercial buildings with small storefronts housing specialty retail stores, restaurants, commercial and professional offices, medical offices, service businesses, institutional and non-profit facilities. Among the unique structures in downtown are the Sierra Madre Playhouse, an active live-stage theater; the Old City Hall, which was vacated by the City in 1977 and has been adaptively reused as offices as well as a single suite bed and breakfast inn called the Jailhouse Inn; the former Hotel Shirley, which has been restored as offices, shops, and residences located on the second level; and the Renaissance Plaza which is now maintained as retail businesses, offices, and residences located on the second level, in a courtyard setting.

The following are notable landmarks in Sierra Madre that are considered unique visual and scenic resources. They provide functional and visual points of reference in the City and can easily be identified.

- Kersting Court with its old school bell tower and pepper trees
- The Hotel Shirley façade
- The cannon and band shell in Memorial Park
- Saint Rita's Catholic Church
- Sierra Madre Congregational Church
- Old North Church
- Villa del Sol d'Oro at Alverno High School
- The Wistaria Vine on Hermosa Avenue
- The Pinney House on Lima Street
- Sierra Madre Elementary School
- Sierra Madre Library
- The Passionist Fathers Mater Dolorosa Retreat Center
- Sierra Madre Canyon Dam
- Mount Wilson Trailhead
- Bailey Canyon Trailhead
- Richardson House and Lizzie's Trail Inn at Mount Wilson Trailhead

- The Sierra Madre Pool
- The Pioneers' Cemetery
- Heasley Field
- The scenic backdrop created by the San Gabriel Mountains

Landform and Topography

The City is located within the boundaries of two geomorphic provinces. The southern urbanized area is within the Peninsular Ranges Geomorphic Province and the northern foothill area is within the Transverse Ranges Geomorphic Province. The City's topography is characterized by broad, gentle foothill slopes within the southern portions of the City and steep hillsides and ridgeline-canyon terrain along the northern portions adjacent to the San Gabriel Mountains of the Angeles National Forest. The northern portion of the City is situated in an area where the alluvial plain meets the southern foothills of the San Gabriel Mountains. The majority of Sierra Madre's urban development is located within the gentler sloping foothill areas of the City. Elevations in the City range from a high of 1,500 feet to a low of 600 feet. The terrain of the City is gently sloping with a consistent downgrade slope of 7.5 percent. The hillside portions of the San Gabriel Mountains within the City's northern boundary consist of south draining canyons, swales, mountainous terrain, ridgelines, knolls, foothills, rock outcroppings, wildlife habitat, and a wide range of native and non-native vegetation.

Scenic Vistas and Corridors

Sierra Madre's scenic vistas and corridors strongly contribute to defining the City's image and identity as they are a means by which residents and visitor experience the City. Scenic vistas and features include gently sloping alluvial fans, rugged mountains and steep slopes, mountain peaks and ridges, rounded hills with boulder outcrops and natural open space. Sierra Madre residents are uniquely positioned to access these scenic vistas and natural open space resources in the Angeles National Forest to the north of and abutting the City. Because the City is situated at the base (southern foothills) of the rugged San Gabriel Mountains of the Angeles National Forest, residents are also in a prime location for accessing views of the foothills. Along the base of these foothills lies two of the City's park and recreation amenities, Bailey Canyon Wilderness Park and Mount Wilson Trail, which along with offering recreational opportunities, residents are afforded major scenic vistas of the City and the region from these parks.

According to the California Scenic Highway Program, a scenic corridor is the land generally adjacent to and visible from the highway. Although there are no officially designated or eligible state scenic highways or corridors in the City, a few City streets play a major role in connecting the City's urbanized areas to scenic vistas in the wilderness areas of the San Gabriel Mountains. These include Mountain Trail, Auburn Avenue, Grove Street and Santa Anita Avenue.

Light and Glare

Sources of light and glare exist within the confines of the City, including building lighting (interior and exterior) and materials (e.g., glass, reflective materials), street lighting, security lighting, sign illumination, and parking-area lighting. These sources are mostly associated with the residential, commercial, and light manufacturing uses located throughout the City. Other sources of nighttime light and glare include vehicular traffic along surrounding roadways. Additionally, a significant amount of ambient lighting comes from surrounding communities and roadways.

2) *Housing Element Project Sites*

Site 1

Site 1 includes nine parcels along Mariposa Avenue and Lima Street that are currently developed with single- and multi-family residential uses. Surrounding land uses include the Sierra Madre City Hall parking lot and Memorial Park to the east, single-family residential uses to the south and west, and the Sierra Madre City Hall complex and commercial uses along Sierra Madre Boulevard to the north. The character of the area feels mixed due to its institutional, residential, and commercial uses. Both streets include sidewalks and curb median. The wide curb median along Mariposa Avenue has several mature street trees. The curb median along Lima Street is narrower and also includes several mature street trees and utility poles. Light is produced in the area from street and household lighting. Glare is low in the area as there are no highly reflective buildings on the site.

Site 2

Site 2 includes ten parcels along Suffolk Avenue and Baldwin Avenue. Site 2 is currently developed with older multi-family development. Surrounding land uses include single-family uses to the east and south, commercial uses including a U.S. Post Office to the west, and multi-family uses and a gas station to the north. The area has a residential character. The wide curb median is planted with several mature trees including oaks. Light is produced in the area from street and household lighting. Glare is low in the area as there are no highly reflective buildings on the site.

Site 3

Site 3 includes one parcel along Sierra Madre Boulevard that is currently developed with four older multi-family residential buildings, open space, and parking areas. Surrounding land uses include other multi-family residential uses to the east, south, and west, and single-family residential to the north. Sierra Madre Boulevard is a two-lane roadway with bike lanes and parking on each side. Although the area feels residential in character, the wider Sierra Madre Boulevard gives the area a busier feel. Areas of Sierra Madre Boulevard near Site 3 include mature street trees in the curb median, while other areas are only planted with grass or graveled. Light is produced in the area from street and household lighting. Glare is low in the area as there are no highly reflective buildings on the site.

Site 4

Site 4 includes one parcel along N. Baldwin Avenue that is currently developed with a single-family residence. Surrounding land uses include other single-family residential uses and the Episcopal Church of the Ascension and private Gooden School to the east, single-family residential uses to the south, west, and north. N. Baldwin Avenue is a two-lane roadway with parking on each side. This part of N. Baldwin feels residential in character. Areas of N. Baldwin Avenue near Site 4 include mature street trees in the curb median, while the area in front of the Episcopal Church is concrete. Light is produced in the area from street and household lighting. Glare is low in the area as there are no highly reflective buildings on the site.

Site A

Site A is located on the parking area of St. Rita Catholic Church. Surrounding land uses single-family residential uses to the east, south, and west. St. Rita Catholic Church is located to the northwest and a single-family residence to the northeast. The area feels residential in character with mature street trees

along N. Baldwin, E. Grandview, and Algeria Avenues. Light is produced in the area from street and site lighting. Glare is low in the area as there are no buildings on the site and no highly reflective buildings in the area.

Site B

Site B is located in the parking area of the United Methodist Church. Surrounding land uses include multi-family uses to the east and south, commercial and school uses to the west, and single-family residential uses to the north. Sierra Madre Boulevard becomes a separated roadway with large center median to the west of Michillinda Avenue. Due to the mixture of uses, this area of Sierra Madre has a more urbanized character. Light is produced in the area from street and site lighting. Glare is low in the area as there are no buildings on the site and no highly reflective buildings in the area.

Site C

Site C is located on the parking area of the Old North Church. Surrounding land uses include commercial uses to the east and south, single- and multi-family residential uses to the west, and multi-family uses to the north. Site C is located to the east of the Sierra Madre City Hall. The area feels more urbanized due to the mixture of commercial, civic uses, and multi-family uses along Sierra Madre Boulevard. Light is produced in the area from street and site lighting. Glare is low in the area as there are no buildings on the site and no highly reflective buildings in the area.

Site D

Site D is located on the asphalt play fields and parking area of the Bethany Church and School. Surround land uses include church uses to the east, single-family residential uses to the south, multi-family residential uses to the west and north. N. Baldwin Avenue to the east is developed with commercial uses. Overall, the area is residential in character with an urbanized character to the east along N. Baldwin Avenue. Light is produced in the area from street and site lighting. Glare is low in the area and only produced by school building windows. There are no buildings on the site and no highly reflective buildings in the area.

B. Regulatory Setting

i) Federal

No existing federal regulations pertain to the visual resources within the project area.

ii) State

Caltrans Scenic Highway Program

The California Department of Transportation (Caltrans) defines a scenic highway as any freeway, highway, road, or other public right-of-way, that traverses an area of exceptional scenic quality. Suitability for designation as a State Scenic Highway is based on vividness, intactness, and unity. There are no officially designated state scenic highways within the City.

iii) Local

City of Sierra Madre Municipal Code

Title 17 (Zoning) of the City's Municipal Code identifies land use categories, development standards, and other general provisions that ensure consistency between the City's General Plan and proposed development projects. The following is a description of the provisions of the City's Municipal Code that are applicable to the General Plan Update.

- **Chapter 17.20 (One-Family Residential Zone)**. In order to maintain the historical, architectural and ecological integrity and quality of the existing single-family residential areas within the City, the following purposes are set forth: A) To encourage development that preserves the small town, mountainous flavor of this closely-knit foothill community; B) To encourage preservation of historical structures; C) To encourage architectural diversity while maintaining architectural accord with the character of the existing neighborhood; D) To promote design in accordance with recognized principles of architecture. Individual designs should reflect only one style of architecture, avoiding the mixture or combined use of several different ones. Classically defined styles would include Craftsman, Victorian, Tudor, Classic Box, Mediterranean, Board and Batten, California Ranch House, etc.; E) To promote consideration of one another's valley and mountain views; F) To ensure adequate light, air, privacy, and open space for each dwelling and in relation to adjacent dwellings; G) To encourage appropriate scale and size of new construction and reconstruction that is compatible with the existing neighborhood and surroundings.

- **Chapter 17.30 (Residential Canyon Zone).** The purposes of this chapter are to: A) Facilitate residential canyon preservation through single-family development standards as set forth in this chapter; B) Maintain the environmental equilibrium unique to the residential canyon consistent with the aesthetic of its rustic and historic character; and C) Establish dwelling size, lot coverage, building massing, and floor area ratios which are consistent with the smaller homes and lots in the canyon area.

- **Chapter 17.35 (Voter's Empowerment).** The purpose of this chapter, also known as the Sierra Madre Voters' Empowerment Ordinance, is to require all new construction in the downtown area to be a maximum of two stories, 30 feet in high, and 13 net dwelling units per acre.

- **Section 17.36.040 (Downtown Design Criteria).** Outlines the design criteria that are required to be applied to all development within the commercial zone within the downtown area of the City. Downtown design standards included standards for architectural style and character, building materials, landscaping, signs, and other general provisions.

- **Chapters 17.48 (Development Standards).** This chapter outlines applicable development standards (e.g., development densities and intensities, building heights, landscaping, setbacks) for all zoning designations.

- **Chapter 17.52 (Hillside Management Zone).** The purposes of this chapter are to: A) Protect the natural environment of hillside areas from change by preserving and protecting the views to and from hillside areas in the City to maintain the identity, image and environmental quality of the City; B) Maintain an environmental equilibrium consistent with the native vegetation, animal life, geology, slopes, and drainage patterns; C) Facilitate hillside preservation through the development standards and guidelines set forth in this chapter; to direct and encourage development that is sensitive to the unique characteristics of the hillside areas in the City, which include, but are not limited to, slopes, land forms, vegetation and scenic quality; accordingly,

innovation in the design of buildings and structures is encouraged so long as the result preserves hillside areas and is consistent with this chapter and with the General Plan; D) Ensure that development in the hillside areas is located so as to result in the least environmental impact; E) Ensure that all hillside development is designed to fit the existing land form; F) Preserve significant natural features of hillside areas, including swales, canyons, knolls, ridgelines, and rock outcrops. Development may necessarily affect natural features; therefore, a major design criterion for all hillside development shall be the minimization of impacts on such natural features; G) Provide safe ingress and egress for vehicular and pedestrian traffic to and within hillside areas, with minimal disturbance of natural features; H) Correlate intensity of development to steepness of terrain to minimize grading, removal of natural vegetation; and to prevent the creation of land instability or fire hazards; I) Provide, in hillside areas, alternative approaches to conventional flat-land development practices by achieving land use patterns and intensities that are consistent with the natural features of hillside areas.

- **Chapter 17.72 (Signs).** This chapter provides standards for signs to safeguard life, health, property, safety and public welfare, while encouraging creativity, variety, compatibility and enhancement of the City's visual image. Sign standards include requirements for but not limited to type, lighting, and location.

City of Sierra Madre 2015 General Plan

The following are relevant policies and implementation measures of the Sierra Madre General Plan and Implementation Program.

General Plan Policies

Land Use Element

- Policy L1.5: Encourage preservation, refurbishment, and adaptive reuse of existing housing stock.
- Policy L4.1: Ensure that the expansion of existing uses is reflective of and complements the overall pattern of development, without changing the character of existing development.
- Policy L6.2: Ensure that any new or expanded structures in residential neighborhoods do not unreasonably obstruct significant mountain or basin views.
- Policy L7.3: Limit the height of new buildings to reflect the prevailing height patterns on the street and within the Sierra Madre community.
- Policy L7.4: Encourage new residential development to be compatible with and complement existing structures including the following:
- Maintenance of front, side, and rear yard setbacks.
- Use of landscaping to complement the design of the structure and reflect the Sierra Madre vegetation patterns, with an emphasis on sustainable, low-water use landscaping and use of permeable surfaces for hardscaping, and the use of irrigation equipment that automatically senses the need for water.
- Minimize paving in the front yard as necessary to accommodate driveways and pedestrian walkways.

- Require that covered parking be provided.
- Prohibit required parking from being located in the front yard setback except in the Residential Canyon Zone.
- Policy L7.6: Consider implementing a design review process.
- Policy L9.4: Provide incentives to rebuild damaged or demolished structures to pre-existing dimensions but in conformance with the City's building code. Incentives may include fee reductions, permit streamlining and other similar measures.
- Policy L10.4: Maintain development standards and minimum lot sizes which result in development with dimensions, quality, and aesthetics consistent with existing developments.
- Policy L10.6: Undertake to develop guidelines which encourage the use of materials which are characteristic of existing development in the Canyon area.
- Policy L10.7: Require the conservation of natural elements such as large rocks, plants and trees.
- Policy L12.2: Provide a program for educating property owners regarding methods of maintenance and upkeep of their property.
- Policy L16.3: Establish performance standards for public safety to address the upkeep and maintenance of sites under construction.
- Policy L17.2: Require that all development be designed to reflect the contours of the existing land form using techniques such as split pads, detached secondary structures (such as garages), and avoiding the use of excessive cantilevers.
- Policy L17.5: Require that exterior lighting be directed away from adjacent properties and the night sky.
- Policy L17.3: Require that all development preserves, to the maximum extent possible, significant features of the natural topography, including swales, canyons, knolls, ridge lines, and rock outcrops.
- Policy L20.1: Require that new residential development be compatible with and complement existing structures on the block:
- Maintain existing front yard setbacks on the block;
- Use compatible building materials, colors, and forms;
- Minimize front yard paving and prohibit front yard parking.
- Policy L20.4: Require that second residential structures added to properties with an existing residential structure be compatible in design.
- Policy L20.5: Require that the front elevation of a property developed with two units maintains the appearance of a single-family structure.
- Policy L20.6: Require that two-unit structures have design elements which avoid flat, planar like structures and provide visual interest, such as balconies, recessed or projecting windows, sloping roofs, landscaped courtyards, etc.

- Policy L24.1: Require that new residential development be compatible with and complement existing structures on the block:
- Maintain existing front yard setbacks on the block;
- Use compatible building materials, colors, and forms;
- Minimize front yard paving and prohibit front yard parking.
- Policy L24.7: Require that development incorporates architectural design details and elements which provide visual character and interest, avoiding flat planar walls and "box-like" appearances. This may include the use of courtyards, balconies, offset plans, deeply recessed or projecting windows, sloping roofs, and extensively landscaped yards.
- Policy L32.1: Allow the reconstruction of existing non-conforming structures which must be replaced due to deterioration or hazard (fire and earthquake).
- Policy L33.4: Encourage the use of architectural design elements such as showcase windows, cornices, and columns to provide interest along the sidewalk.
- Policy L33.5: Require that front elevations be designed to mimic small individual storefronts even if one tenant intends to use the space. This may be accomplished using vertical design elements to break up the façade.
- Policy L33.6: Encourage the use of traditional building materials such as tile, textured concrete, color-tinted concrete, decorative masonry (brick, river rock), wood siding, and stucco.
- Policy L33.8: Require that landscaping be designed with form and function in mind – that the plant materials be low maintenance as well as attractive, and drought tolerant plants that use the minimum amount of water.
- Policy L33.9: Require signage to be designed as part of the overall architectural design theme through the use of similar materials and colors, as well as proportionate size and location.
- Policy L34.1: Encourage the enhancement of rear entrances to existing businesses.
- Policy L37.9: Encourage the addition of street trees to make the area less industrial and more attractive.
- Policy L40.1: Limit height of new construction in the central core area to a maximum of two stories and 30 feet.
- Policy L49.1: Encourage restoration of original building facades, and adaptive reuse of existing buildings through educational programs and economic incentives such as reduced permit fees and parking requirements.
- Policy L49.3: Maintain pedestrian-level street lighting in the downtown district to enhance the nighttime dining and shopping experience, and consider installation of the same on East Montecito Avenue in accordance with dark sky guidelines.
- Policy L49.8: Improve the aesthetic qualities of the public parking lots by adding color plantings and encouraging improvements to rear facades of buildings.

- Policy L49.9: Encourage the addition of street trees to make the area less industrial and more attractive.

Resource Management Element

- Policy R6.1: Require that all new development projects utilize light fixtures that shield the light source so that light is cast downward to avoid light spillage offsite or upward into the sky.
- Policy R6.2: Discourage continuous all-night exterior lighting and encourage motion-sensored lighting.
- Policy R6.3: Encourage the use of fixtures like the "shoe box" design that are capable of providing accurate light patterns, and can often be used for lighting without spilling onto the neighboring property and upward into the sky.
- Policy R7.1: The City shall use the lowest wattage of lamp that is feasible and encourage the public to do the same.
- Policy R7.2: The City shall, whenever possible, turn off the lights or use motion sensor controlled lighting and encourage the public to do the same.
- Policy R7.3: Investigate the possibility of having businesses turn off lights when they are closed.
- Policy R8.1: Encourage outdoor lighting to be designed and installed in a manner that confines the direct lighting rays to the property upon which the lighting is installed so as to protect adjacent and nearby residential districts and public rights-of- way, and reduce "skyglow."
- Policy R8.2: Lighting in and near residential areas shall be minimal and shielded to prevent nuisance glare.
- Policy R8.3: Lighting attached to single-family home structures should not exceed the height of the eave, and residential lighting pole height restrictions can be considered to control light trespass on adjacent properties and upward into the sky.
- Policy R8.4: Provide adequate illumination of all streets, alleys, and public areas.
- Policy R9.1: Provide pamphlets from organizations dedicated to the preservation of the night sky.

Implementation Program Measures

Land Use Implementation Program

- Measure IM-45: The City shall amend the C (Commercial) Zoning Ordinance as necessary to require windows and doorways along the street, front elevations designed to mimic individual storefronts, landscaping designed for form and function, and incorporation of signage into overall building design.
- Measure IM-9: The City shall establish a pre-application process to require neighbor notification and appeal opportunities with respect to any new construction and additions that exceeds one story in height or significantly increases the volume and/or footprint of the structure.

- Measure IM-10: The City shall establish guidelines to minimize direct lines-of-sight between neighboring homes and backyards and encourage preservation of mountain or basin views as they relate to new or expanded structures.
- Measure IM-30: The City shall continue to enforce the Hillside Management Zone Ordinance, and amend as necessary to protect the views to and from hillside areas to maintain the image and identity of the City as a village of the foothills.
- Measure IM-6: The City shall amend the Zoning Code as necessary to require that the expansion of existing uses is reflective of and complements the overall pattern of development without changing the existing character of development.

Hillside Preservation Implementation Program

- Measure IM-1: The City shall continue to enforce the Hillside Zone Ordinance and other ordinances that seek to protect the hillside areas.

3. ENVIRONMENTAL IMPACTS AND MITIGATIONS

A. Threshold of Significance

Appendix G of the CEQA Guidelines provides thresholds address impacts to aesthetics. Specifically, the Guidelines state that the proposed project may have an adverse significant aesthetic impact if it 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) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality; or
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

B. Project Impacts and Mitigation Measures

Impact A-1: Would the project have a substantial adverse effect on a scenic vista?

Impact Analysis:

The 2015 General Plan EIR determined that there would be no adverse impacts on scenic vistas as growth and development (e.g., infill development, redevelopment, and revitalization/restoration) on the City's infill opportunity sites include mostly underutilized parcels in various areas of the City. Additionally, as described in the 2015 General Plan EIR, policies and implementation measures in the City's Land Use Element would have both direct and indirect beneficial effects to protect hillside areas and design standards and guidelines in the City's Municipal Code would ensure that future development would not create significant impacts on scenic vistas.

The project proposes the land use designation changes, rezoning, and updates to the General Plan Land Use, Safety, and Circulation Elements. The land use designation changes and rezoning would occur on

sites in the foothill area, on infill sites, and in areas of medium-high density residential uses around the downtown area near Baldwin Avenue, Sierra Madre Boulevard, and adjacent streets. No development is proposed along Mountain Trail, Auburn Avenue, Grove Street and Santa Anita Avenue, City streets that connect the City's urbanized areas to scenic vistas in the wilderness areas of the San Gabriel Mountains. Similar to the development proposed under the 2015 General Plan Update, the project would concentrate redevelopment efforts on underutilized parcels in the foothill area of the City and not the hillside slope area.

The update to the Land Use Element includes establishing two new multi-family residential land use categories (R-3-20 and R-3-30), creating an Affordable Housing Overlay on select congregational sites, along with minor changes to the Land Use table and map to accommodate residential land uses on the sites identified to meet the RHNA allocation. The update to the Safety Element includes policies related to limiting risk from wildfire, including avoiding development in Very High Fire Severity Zones, updating maps related to fire hazards, and increasing education on vegetation management.

The two new land use categories would only be applied to parcels that are currently designated as Residential High Density and would not be applied to any parcels in hillside slope areas (which are designated as Residential Low Density, Hillside, Institutional, Municipal, and Constructed Open Space). The Affordable Housing Overlay would be restricted to congressional land in the City on parcels located in the foothill area. Therefore, no impact would occur to hillside slope areas from land use designation changes. Safety Element policy changes would reduce the risk of fire scars in hillside areas and would not result in any impact. The update to the Circulation Element does not include any policies related to street or roadway changes and would not have the potential to impact scenic resources.

Therefore, similar to the 2015 General Plan Update, the project would not result in impacts to scenic vistas and impacts would be less than significant.

Mitigation Measures:

None required.

Impact A-2: Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Impact Analysis:

The 2015 General Plan EIR determined that there would be no impact to state scenic highways as there are no state-designated or eligible scenic highways in Sierra Madre. No new state-designated or eligible scenic highways have been designated in Sierra Madre. Therefore, similar to the 2015 General Plan Update, there would be no impact.

Mitigation Measures:

None required.

Impact A-3: Would the project in non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Impact Analysis:

The 2015 General Plan DEIR found that the General Plan Update would not substantially degrade the existing visual quality and character of the City as Sierra Madre is almost entirely built out and that the visual appearance of the neighborhoods would remain largely unchanged, since few changes are proposed for those areas. Additionally, future development activities accommodated by the General Plan Update would also be subject to the design standards and guidelines outlined in the Title 17 (Zoning) of the City's Municipal Code. Lastly, the General Plan includes policies and implementation measures that would have both direct and indirect beneficial effects for protecting the visual quality and character of hillside and other areas of the City, as well as visual resources throughout. Therefore, new or revised policies, land use changes, and other components of the proposed General Plan Update were not anticipated to dramatically alter the character or visual quality of the community.

The update to the Land Use Element includes establishing two new multi-family residential land use categories (R-3-20 and R-3-30), creating an Affordable Housing Overlay on select congregational sites, along with minor changes to the Land Use table and map to accommodate residential land uses on the sites identified to meet the RHNA allocation. The land use designation changes and rezoning would occur on Sites 1-4 and A-D, which are located in the urbanized foothill area. These sites are on infill sites in areas designated for medium-high density residential or institutional uses around the downtown area near Baldwin Avenue, Sierra Madre Boulevard, and adjacent streets. Sites 1-4 and A-D are currently developed with residential and institutional uses and are surrounded by existing single- and multi-family residential, commercial, and institutional development. Sites A and C are located in the parking areas of the St. Rita Catholic Church and the Old North Church, both described as notable landmarks in the City as they can be easily identified. However, development on all of the proposed sites would be subject to review by the City for compliance with the City's Municipal Code standards and General Plan policies related to design, aesthetics, and scenic quality to obtain all necessary approvals, clearances, and permits. No changes are proposed to the St. Rita Catholic Church and the Old North Church buildings themselves and they would remain notable landmarks in the City.

The update to the Safety Element includes policies related to limiting risk from wildfire, including avoiding development in Very High Fire Severity Zones, updating maps related to fire hazards, and increasing education on vegetation management. While these policies would result in the removal of some vegetation, this removal would also limit new development in the canyon and foothill slope area and reduce the risk of fire scars in foothill areas and impacts would be less than significant. The update to the Circulation Element updates policies related to transportation analysis thresholds and does not include any policies with the potential to impact scenic resources.

Therefore, similar to the 2015 General Plan EIR conclusions, the proposed project would not conflict with applicable zoning and other regulations governing scenic quality.

Mitigation Measures:

None required.

Impact A-4: Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Impact Analysis:

The 2015 General Plan EIR found that because the City and surrounding areas are largely developed, the lighting associated with improvements and structures of future development accommodated by the

General Plan Update would not substantially increase nighttime lighting and glare in Sierra Madre or its surroundings. Development activities resulting from the 2015 General Plan Update were not anticipated to generate more nighttime lighting or glare than that which is already present on or near these sites. Furthermore, all future development projects would be required to comply with California's Building Energy Efficiency Standards for Residential and Nonresidential Buildings, Title 24, Part 6, of the California Code of Regulations, which outlines mandatory provisions for lighting control devices and luminaires and would be required to comply with the City's Title 17 (Zoning) of the City's Municipal Code, including the lighting provisions outlined in Section 17.28.250 (Lighting) of Chapter 17.28 (Multiple Family Residential Zone) and Section 17.36.160 (Lighting) of Chapter 17.36 (Commercial Zone).

The project would establish two new multi-family residential land use categories (R-3-20 and R-3-30), create an Affordable Housing Overlay on select congregational sites, and include minor changes to the Land Use table and map to accommodate residential land uses on the sites identified to meet the RHNA allocation. The land use designation changes and rezoning on Sites 1-4 and A-D would be located in the foothill area, which is already fully developed with urbanized land uses that include lighting sources and are surrounded by existing single- and multi-family residential, commercial, and institutional development. Similar to development that would occur under the 2015 General Plan Update, development resulting from the project would be required to comply with California's Building Energy Efficiency Standards for Residential and Nonresidential Buildings, Title 24, Part 6, of the California Code of Regulations and the City's Title 17 (Zoning) of the City's Municipal Code, including the lighting provisions outlined in Section 17.28.250 (Lighting) of Chapter 17.28 (Multiple Family Residential Zone). Additionally, development on these sites would be subject to review by the City for compliance with the City's General Plan policies related to lighting, glare, and dark sky to obtain all necessary approvals, clearances, and permits.

The update to the Safety Element includes policies related to limiting risk from wildfire, including avoiding development in Very High Fire Severity Zones, updating maps related to fire hazards, and increasing education on vegetation management. None of these policies propose uses that would include light or glare producing elements and impacts would be less than significant. The update to the Circulation Element updates policies related to transportation analysis thresholds and does not include any policies with the potential to create light or glare.

Therefore, similar to the 2015 General Plan EIR conclusions, the proposed project would not result in an increase in light or glare.

Mitigation Measures:

None required.

4. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Similar to the findings of the 2015 General Plan EIR, all impacts would be less-than significant. No mitigation measures are necessary.

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IV. ENVIRONMENTAL IMPACT ANALYSIS
B. AIR QUALITY

1. INTRODUCTION

This section of the Draft SEIR evaluates the potential for the Sierra Madre General Plan Update with the Housing Element 2021-2029 (Housing Element) to impact air quality in a local and regional context. The analysis in this section is based on land uses associated with the Housing Element, as modeled using the California Emissions Estimator Model (CalEEMod) and the vehicle mile traveled (VMT) and trip generation provided in the Traffic Impact Study prepared by Gibson Transportation Consultants (see Appendix E). The Sierra Madre General Plan Housing Element Air Quality and Greenhouse Gas Impact Study prepared by MD Acoustics (July 2021) is included in Appendix B of this Draft SEIR.

A. 2015 General Plan EIR Analysis and Conclusions

The General Plan EIR determined that implementation of the 2015 General Plan Update would be consistent with the South Coast Air Quality Management District (SCAQMD) Air Quality Management Plan, as buildout of the 2015 General Plan Update would not exceed the current overall Southern California Association of Governments (SCAG) service population estimates and would not cumulatively contribute to the nonattainment designations of the South Coast Air Basin (Basin). Although the 2015 General Plan Update resulted in slightly higher population than SCAG projections, SCAG projections for the City were based on the 1996 Sierra Madre General Plan and as a result, SCAG growth projections and the associated emissions inventory in SCAQMD's Air Quality Management Plan (AQMD) did not include the additional population growth forecasted in the 2015 General Plan Update. In addition, the General Plan EIR found that operation of the new land uses associated with the 2015 General Plan Update would not cumulatively contribute to the nonattainment designations of Basin and the 2015 General Plan Update would be consistent with the AQMP and impacts would not be significant.

The General Plan EIR determined that construction activities associated with future development that would be accommodated under the 2015 General Plan Update would generate short-term emissions in exceedance of SCAQMD's threshold criteria and cumulatively contribute to the nonattainment designations of the Basin. Air quality emissions related to future development under the 2015 General Plan Update must be addressed on a project-by-project basis and would be subject to regulatory measures, rules, and policies, as well as project-specific mitigation measures and implementation measures; however, it is possible that some of the new development projects that would be accommodated by the 2015 General Plan Update could exceed relevant SCAQMD significance thresholds and cumulative contribute to the nonattainment designations of the Basin for O_3 and particulate matter (PM_{10} and $PM_{2.5}$). Therefore, construction-related air quality impacts would be significant. Furthermore, because cumulative development within the City would exceed the regional significance thresholds, the General Plan EIR found that the 2015 General Plan Update could contribute to an increase in health effects in the basin until such time the attainment standards are met in the Basin.

The General Plan EIR determined that implementation of the 2015 General Plan Update would not result in operational-phase criteria air pollutant emissions that would exceed SCAQMD's regional significance thresholds. In addition, implementation of the policies and implementation measures of the 2015 General Plan Update and Implementation Programs, respectively, would contribute to reducing air quality emissions. Therefore, operational air quality impacts associated with future development of the 2015 General Plan Update would not be significant. Furthermore, the General Plan EIR found that as cumulative

development within the City would not exceed the regional significance thresholds, the 2015 General Plan Update would not substantially cumulatively contribute to the nonattainment designations of Basin or contribute to an increase in health effects in the basin.

The General Plan EIR determined that implementation of the 2015 General Plan Update could result in new sources of criteria air pollutant emissions and toxic air contaminants that could expose sensitive receptors to substantial pollutant concentrations including Toxic Air Contaminants from light industrial and commercial processes as well as trucks and off-road equipment. Emissions from industrial and commercial uses would be controlled by SCAQMD through permitting and would be subject to further study and health risk assessment prior to issuance of air quality permits and implementation of 2015 General Plan Update policies and implementation measures would contribute to minimizing air quality impacts to both stationary and mobile uses, however until specific development projects are proposed and air quality modeling can be performed, impacts are considered to be significant. However, the General Plan EIR found that CO hotspots would not be an environmental impact of concern for the 2015 General Plan Update.

The General Plan EIR determined that buildout of the 2015 General Plan Update could site sensitive land uses in proximity to air pollution sources and expose sensitive receptors to substantial pollutant concentrations. Therefore, air quality impacts from placement of sensitive uses near new major pollutant sources would be significant.

Lastly, the General Plan EIR determined that light-manufacturing land uses that would be accommodated under the 2015 General Plan Update could create objectionable odors and impacts could be significant. However, the General Plan EIR found that residential and commercial land uses and construction activities associated with the 2015 General Plan Update would not generate substantial odors and impacts would not be significant.

2. ENVIRONMENTAL SETTING

A. Air Quality Background

The project site is located within the South Coast Air Basin (Basin), an approximately 6,745-square-mile area bounded by the Pacific Ocean to the west; the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east; and San Diego County to the south. The Air Basin includes all of Orange County as well as the non-desert portions of Los Angeles, San Bernardino, and Riverside Counties, in addition to the Coachella Valley area in Riverside County. The regional climate within the Air Basin is considered to be semi-arid and is characterized by warm summers, mild winters, infrequent seasonal rainfall, moderate daytime onshore breezes, and moderate humidity. The air quality within the Air Basin is primarily influenced by meteorology, geography, and a wide range of emissions sources, such as dense population centers, heavy vehicular traffic, and industry.

Air pollutant emissions within the Basin are generated primarily by stationary and mobile sources. Stationary sources can be divided into two major subcategories: point sources and area sources. Point sources occur at a specific location and are usually identified by an exhaust vent or stack. Examples of point sources include boilers or combustion equipment that produce electricity or generate heat. Area sources are widely distributed and include such sources as residential and commercial water heaters, painting operations, lawn mowers, agricultural fields, landfills, and some consumer products, such as barbeque lighter fluid and hair spray. Mobile sources refer to emissions from motor vehicles, including tailpipe and evaporative emissions, and are classified as either on-road or off-road. On-road sources may be legally operated on roadways and highways. Off-road sources include aircraft, ships, trains, race cars,

and self-propelled construction equipment. Air pollutants can also be generated by the natural environment, such as when high winds suspend fine dust particles.

Both the federal and state governments have established ambient air quality standards for outdoor concentrations of various pollutants in order to protect the public health and welfare. These pollutants are referred to as "criteria air pollutants" as a result of the specific standards, or criteria, that have been adopted for them. The federal and state standards have been set at levels considered safe to protect public health, including the health of sensitive populations, such as asthmatics, children, and the elderly with a margin of safety; and to protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings.

B. Air Pollutants and Potential Health Effects

The criteria air pollutants that are most relevant to current air quality planning and regulation in the Basin include ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), respirable particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$), sulfur dioxide (SO_2), volatile organic compounds (VOC)/reactive organic gases (ROG), and lead (Pb). In addition, toxic air contaminants (TACs) are a concern in the Basin. The characteristics of each of these pollutants are briefly described below.

The health effects of criteria pollutants (i.e., O_3, CO, PM_{10} and $PM_{2.5}$, NO_2, SO_2, and Pb) and TACs are described below. In addition, a list of the harmful effects of each criteria pollutant is provided in **Table IV.B-1, Summary of Health Effects of Criteria Pollutants**.

Table IV.B-1
Summary of Health Effects of Criteria Pollutants

Pollutants	Primary Health and Welfare Effects
Ozone (O_3)	• Aggravation of respiratory and cardiovascular diseases • Reduced lung function • Increased cough and chest discomfort
Carbon Monoxide (CO)	• Aggravation of some heart disease (angina) • Reduced tolerance for exercise • Impairment of mental function • Impairment of fetal development • Death at high levels of exposure
Nitrogen Dioxide (NO_2)	• Aggravation of respiratory illness
Respirable and Fine Particulate Matter (PM_{10} and $PM_{2.5}$)	• Reduced lung function • Aggravation of respiratory and cardio-respiratory diseases • Increases in mortality rate • Reduced lung function growth in children
Sulfur Dioxide (SO_2)	• Aggravation of respiratory diseases (asthma, emphysema) • Reduced lung function
Lead (Pb)	• Behavioral and hearing disabilities in children • Nervous system impairment
Source: South Coast Air Quality Management District, Guidance Document for Air Quality Issues in General Plans and Local Planning, Appendix C, 2005.	

1) *Criteria Pollutants*

a) Ozone

Ozone is a highly reactive and unstable gas that is formed when reactive organic gases (ROGs), sometimes referred to as volatile organic compounds (VOC), and nitrogen oxides (NO_x), byproducts of internal combustion engine exhaust, undergo slow photochemical reactions in the presence of sunlight. O_3 concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable to the formation of this pollutant. 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. Short-term exposures (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. Elevated ozone levels are associated with increased school absences. In recent years, a correlation between elevated ambient ozone levels and increases in daily hospital admission rates, as well as mortality, has also been reported. An increased risk for asthma has been found in children who participate in multiple sports and live in high ozone communities.

Ozone exposure under exercising conditions is known to increase the severity of the observed responses mentioned above. Animal studies suggest that exposures to a combination of pollutants that include ozone may be more toxic than exposure to ozone alone. Although lung volume and resistance changes observed after a single exposure diminish with repeated exposures, biochemical and cellular changes appear to persist, which can lead to subsequent lung structural changes.

b) Carbon Monoxide (CO)

Carbon monoxide 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 during the winter morning, when little to no wind and surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, unlike O_3, motor vehicles operating at slow speeds are the primary source of CO in the Basin. The highest ambient CO concentrations are generally found near congested transportation corridors and intersections.

Individuals with a deficient blood supply to the heart are the most susceptible to the adverse effects of CO exposure. The effects observed include earlier onset of chest pain with exercise, and electrocardiograph changes indicative of worsening oxygen supply to the heart.

Inhaled CO has no direct toxic effect on the lungs, but exerts its effect on tissues by interfering with oxygen transport by competing with oxygen to combine with hemoglobin present in the blood to form carboxyhemoglobin (COHb). Hence, conditions with an increased demand for oxygen supply can be adversely affected by exposure to CO. Individuals most at risk include patients with diseases involving heart and blood vessels, fetuses, and patients with chronic hypoxemia (oxygen deficiency) as seen in high altitudes.

Reduction in birth weight and impaired neurobehavioral development has been observed in animals chronically exposed to CO resulting in COHb levels similar to those observed in smokers. Recent studies have found increased risks for adverse birth outcomes with exposure to elevated CO levels. These include pre-term births and heart abnormalities. Additional research is needed to confirm these results.

c) Nitrogen Dioxide (NO_2)

Nitrogen dioxide is a nitrogen oxide compound that is produced by the combustion of fossil fuels, such as in internal combustion engines (both gasoline and diesel powered), as well as point sources, especially power plants. Of the seven types of NO_x compounds, NO_2 is the most abundant in the atmosphere. As ambient concentrations of NO_2 are related to traffic density, commuters in heavy traffic may be exposed to higher concentrations of NO_2 than those indicated by regional monitors.

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 exposures to NO2 at levels found in homes with gas stoves, which are higher than ambient levels found in Southern California. Increase in resistance to air flow and airway contraction is observed after short-term exposure to NO2 in healthy individuals. Larger decreases in lung functions are observed in individuals with asthma or chronic obstructive pulmonary disease (e.g., chronic bronchitis, emphysema) than in healthy individuals, indicating a greater susceptibility of these sub-groups.

In animals, exposure to levels of NO2 considerably higher than ambient concentrations result in increased susceptibility to infections, possibly due to the observed changes in cells involved in maintaining immune functions. The severity of lung tissue damage associated with high levels of ozone exposure increases when animals are exposed to a combination of O3 and NO2.

d) Particulate Matter (PM_{10} and $PM_{2.5}$)

Respirable and fine particulate matter PM_{10} and $PM_{2.5}$ consist of extremely small, suspended particles or droplets 10 microns and 2.5 microns or smaller in diameter, respectively. Some sources of particulate matter, like pollen and windstorms, are naturally occurring. However, in populated areas, most particulate matter is caused by road dust, diesel soot, combustion products, abrasion of tires and brakes, and construction activities.

A consistent correlation between elevated ambient respirable and fine particulate matter (PM_{10} and $PM_{2.5}$) levels and an increase in mortality rates, respiratory infections, number and severity of asthma attacks and the number of hospital admissions has been observed in different parts of the United States and various areas around the world. In recent years, 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 fine particulate matter concentration levels have also been related to hospital admissions for acute respiratory conditions in children, to school and kindergarten absences, 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 PM_{10} and $PM_{2.5}$.

e) Sulfur Dioxide (SO_2)

Sulfur dioxide is a colorless, extremely irritating gas or liquid. It 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 SO_2 oxidizes in the atmosphere, it forms sulfates (SO_4). Collectively, these pollutants are referred to as sulfur oxides (SO_x).

A few minutes exposure to low levels of SO_2 can result in airway constriction in some asthmatics, all of whom are sensitive to its effects. In asthmatics, increase in resistance to air flow, as well as reduction in breathing capacity leading to severe breathing difficulties, are observed after acute exposure to SO_2. In contrast, healthy individuals do not exhibit similar acute responses even after exposure to higher concentrations of SO_2.

Animal studies suggest that despite SO_2 being a respiratory irritant, it does not cause substantial lung injury at ambient concentrations. However, very high levels of exposure can cause lung edema (fluid accumulation), lung tissue damage, and sloughing off of cells lining the respiratory tract.

Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient SO_2 levels. In these studies, efforts to separate the effects of SO_2 from those of fine particles have not been successful. It is not clear whether the two pollutants act synergistically or one pollutant alone is the predominant factor.

f) Lead (Pb)

Lead occurs in the atmosphere as particulate matter. The combustion of leaded gasoline is the primary source of airborne lead in the Basin. The use of leaded gasoline is no longer permitted for on-road motor vehicles, so the majority of such combustion emissions are associated with off-road vehicles, such as racecars. However, because leaded gasoline was emitted in large amounts from vehicles when leaded gasoline was used for on-road motor vehicles, lead is present in many urban soils and can be re-suspended in the air. Other sources of lead include the manufacturing and recycling of batteries, paint, ink, ceramics, ammunition, and the use of secondary lead smelters.

Lead is also found in lead-based paint, which is considered to be a health hazard for people, especially children. From the turn of the century through the 1940s, paint manufacturers used lead as a primary ingredient in many oil-based paints. Use of lead in paint decreased but was still used until 1978, when it was banned from residential use. Remodeling, renovations, or demolition activities in older buildings could disturb lead-based paint surfaces.

Fetuses, infants, and children are more sensitive than others to the adverse effects of lead exposure. Exposure to low levels of lead can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple commands, and lower intelligence levels. In adults, increased lead levels are associated with increased blood pressure.

Lead poisoning can cause anemia, lethargy, seizures and death. It appears that there are no direct effects of lead on the respiratory system. Lead can be stored in the bone from early-age environmental exposure, and elevated blood lead levels can occur due to the breakdown of bone tissue during pregnancy, hyperthyroidism (increased secretion of hormones from the thyroid gland) and osteoporosis (breakdown of bony tissue). Fetuses and breast-fed babies can be exposed to higher levels of lead because of previous environmental lead exposure of their mothers.

g) Sulfates (SO_2 and SO_4)

Most of the health effects associated with fine particles and SO_2 at ambient levels are also associated with SO_4. Thus, both mortality and morbidity effects have been observed with an increase in ambient SO_4

concentrations. However, efforts to separate the effects of SO_4 from the effects of other pollutants have generally not been successful.

Clinical studies of asthmatics exposed to sulfuric acid suggest that adolescent asthmatics are possibly a subgroup susceptible to acid aerosol exposure. Animal studies suggest that acidic particles, such as sulfuric acid aerosol and ammonium bisulfate, are more toxic than non-acidic particles like ammonium sulfate. Whether the effects are attributable to acidity or to particles remains unresolved.

2) *Volatile Organic Compounds (VOCs)*

Volatile Organic Compounds are organic compounds that can evaporate into an organic gas. VOCs can either be reactive or non-reactive. VOC emissions often result from the evaporation of solvents in architectural coatings. Reactive Organic Gases are organic gases that undergo a photochemical reaction, thus are reactive. ROG emissions are generated from the exhaust of mobile sources. Both VOC and ROGs are precursors to ozone and the terms can be used interchangeably.

3) *Toxic Air Contaminants (TACs)*

Toxic Air Contaminants refer to a diverse group of air pollutants that are capable of causing chronic (i.e., of long duration) and acute (i.e., severe but of short duration) adverse effects on human health. TACs include both organic and inorganic chemical substances that may be emitted from a variety of common sources, including gasoline stations, motor vehicles, dry cleaners, industrial operations, painting operations, and research and teaching facilities. TACs are different than “criteria” pollutants in that ambient air quality standards have not been established for them, largely because there are hundreds of air toxics and their effects on health tend to be felt on a local scale rather than on a regional basis.

TACs are a broad class of compounds known to cause or contribute to cancer or non-cancer health effects such as birth defects, genetic damage, and other adverse health effects. As discussed previously, effects from TACs may be both chronic and acute on human health. Acute health effects are attributable to sudden exposure to high quantities of air toxics. These effects include nausea, skin irritation, respiratory illness, and, in some cases, death. Chronic health effects result from low-dose, long-term exposure from routine releases of air toxics. The effect of major concern for this type of exposure is cancer, which requires a period of 10 to 30 years after exposure to develop.

TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuel combustion, and commercial operations (e.g., dry cleaners). TACs are typically found in low concentrations, even near their source (e.g., benzene near a freeway). Because chronic exposure can result in adverse health effects, TACs are regulated at the regional, State, and Federal level.

Diesel exhaust is the predominant TAC in urban air and is estimated to represent about two-thirds of the cancer risk from TACs (based on the statewide average). According to the California Air Resources Board (CARB), diesel exhaust is a complex mixture of gases, vapors, and fine particles. This complexity makes the evaluation of health effects of diesel exhaust a complex scientific issue. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the CARB, and are listed as carcinogens either under the State’s Proposition 65 or under the Federal Hazardous Air Pollutants programs.

Exposure to DPM may be a health hazard, particularly to children whose lungs are still developing and the elderly who may have other serious health problems. DPM levels and resultant potential health effects may be higher in close proximity to heavily traveled roadways with substantial truck traffic or near

industrial facilities. According to CARB, DPM exposure may lead to the following adverse health effects: (1) aggravated asthma; (2) chronic bronchitis; (3) increased respiratory and cardiovascular hospitalizations; (4) decreased lung function in children; (5) lung cancer; and (6) premature deaths for people with heart or lung disease.[1,2]

To provide a perspective on the contribution that DPM has on the overall statewide average ambient air toxics potential cancer risk, CARB evaluated risks from specific compounds using data from CARB's ambient monitoring network. CARB maintains a 21-site air toxics monitoring network, which measures outdoor ambient concentration levels of approximately 60 air toxics. CARB has determined that, of the top ten inhalation risk contributors, DPM contributes approximately 68 percent of the total potential cancer risk.[3]

C. Regulatory Setting

Ambient air quality standards (AAQS) have been adopted at the state and federal levels for criteria air pollutants. In addition, both the state and federal government regulate the release of TACs. The project site is in the South Coast Air Basin and is subject to the rules and regulations imposed by the SCAQMD as well as the California AAQS adopted by the California Air Resources Board (CARB) and National AAQS adopted by the United States Environmental Protection Agency (EPA). Federal, state, regional, and local laws, regulations, plans, or guidelines that are potentially applicable to the project are summarized below.

1) *Criteria Pollutants*

a) *Federal*

i) *Federal Clean Air Act*

The Federal Clean Air Act (CAA) was first enacted in 1955 and has been amended numerous times in subsequent years, with the most recent amendments in 1990. At the federal level, the United States Environmental Protection Agency (USEPA) is responsible for implementation of some portions of the CAA (e.g., certain mobile source and other requirements). Other portions of the CAA (e.g., stationary source requirements) are implemented by state and local agencies.

The 1990 amendments to the CAA identify specific emission reduction goals for areas not meeting the National Ambient Air Quality Standard (NAAQS). These amendments require both a demonstration of reasonable further progress toward attainment and incorporation of additional sanctions for failure to attain or to meet interim milestones. Table IV.A-2 shows the NAAQS currently in effect for each criteria pollutant and their relative attainment status. The Air Basin fails to meet national standards for O3 and PM2.5 and, therefore, is considered a federal "non-attainment" area for these pollutants. In addition, Los Angeles County fails to meet the national standard for lead and, therefore, is considered a federal "non-attainment" area for lead.

[1*] *California Air Resources Board, Overview: Diesel Exhaust and Health Website, accessed: August 6, 2020.*

[2] *California Air Resources Board, Fact Sheet: Diesel Particulate Matter Health Risk Assessment Study for the West Oakland Community: Preliminary Summary of Results, March 2008.*

[3] *South Coast Air Quality Management District, MATES IV Final Report, 2015.*

b) State

i) California Clean Air Act

The California Clean Air Act (CCAA), signed into law in 1988, requires all areas of the state to achieve and maintain the California Ambient Air Quality Standards (CAAQS) by the earliest practicable date. Section 39612 of the Health and Safety Code (enacted as Section 6.5 of the CCAA), authorizes CARB, beginning July 1, 1989, to require districts to impose additional permit fees on nonvehicular sources authorized by district permits to emit 500 tons or more per year of any nonattainment pollutant or its precursors.

In 1989, the Board adopted sections 90800-90803, Title 17, CCR, established the California Clean Air Act Nonvehicular Source Fee Regulations for the fiscal year 1989-1990. This regulation specified that fees shall be based on the estimated 1987 emissions from all permitted facilities which are located in nonattainment areas and are identified as having emitted 500 tons or more per year of any nonattainment pollutant or its precursors in 1987. Subsequently, the Board adopted amendments to the regulations and added new sections to provide funding for the subsequent years. For each year the fees were based on the most current emission estimates available for the effected facilities.

Table IV.B-2, **Ambient Air Quality Standards**, includes the CAAQS currently in effect for each of the criteria pollutants, as well as other pollutants recognized by the state. As shown in **Table IV.B-2**, the CAAQS include more stringent standards than the NAAQS. The Air Basin fails to meet state standards for O_3, PM_{10}, and $PM_{2.5}$ and, therefore, is considered a state "non-attainment" area for these pollutants.

Table IV.B-2
Ambient Air Quality Standards

Air Pollutant	Averaging Period	California Standard [a,b]	Federal Standard [a,b]	SCAQMD Attainment Status [c]	
				California Standard [d]	Federal Standard [d]
Ozone (O_3)	1 Hour	0.09 ppm (180 µg/m^3)	--	Non-Attainment	--
	8 Hour	0.07 ppm (137 µg/m^3)	0.07 ppm (137 µg/m^3)	Non-Attainment	Non-Attainment (Extreme)
Respirable Particulate Matter (PM_{10})	24 Hour	50 µg/m^3	150 µg/m^3	Non-Attainment	Attainment
	Annual	20 µg/m^3	--		
Fine Particulate Matter ($PM_{2.5}$)	24 Hour	--	35 µg/m^3	Non-Attainment	Non-Attainment (Serious)
	Annual	12 µg/m^3	12 µg/m^3		
Carbon Monoxide (CO)	1 Hour	20.0 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	Attainment	Attainment
	8 Hour	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)		
Nitrogen Dioxide (NO_2)	1 Hour	0.18 ppm (339 µg/m^3)	0.10 ppm (188 µg/m^3)	Attainment	Unclassified / Attainment
	Annual	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)		

Table IV.B-2
Ambient Air Quality Standards

Air Pollutant	Averaging Period	California Standard [a,b]	Federal Standard [a,b]	SCAQMD Attainment Status [c]	
				California Standard [d]	Federal Standard [d]
Sulfur Dioxide (SO_2)	1 Hour	0.25 ppm (655 µg/m^3)	0.075 ppm (196 µg/m^3)	Attainment	Unclassified / Attainment
	3 hour	--	0.5 ppm (1,300 µg/m^3)		
	24 hour	0.04 ppm (105 µg/m^3)	0.14 ppm (365 µg/m^3)		
	Annual	--	0.03 ppm (655 µg/m^3)		
Lead	30 Day Average	1.5 µg/m^3	--	Attainment	Partial Non-Attainment [e]
	Rolling 3-Month Average	--	0.15 µg/m^3		
Sulfates	24 Hour	25 µg/m^3	--	Attainment	--
Hydrogen Sulfide (H_2S)	1 hour	0.03 ppm (42 µg/m^3)	--	Unclassified	--

Notes: ppm = parts per million by volume; µg/m^3 = microgram per cubic meter

a An ambient air quality standard is a concentrated level expressed in either parts per million or micrograms per cubic meter and averaged over a specific time period (e.g., 1 hour). The different averaging times and concentrations are meant to protect against different exposure effects. Some ambient are quality standards are expressed as a concentration that is not to be ex ceded. Others are expressed as a concentration that is not to be equaled or exceeded.

b Ambient Air Quality Standards based on the 2016 AQMP.

c "Attainment" means that the regulatory agency has determined based on established criteria, that the Air Basin meets the identified standard. "Non-Attainment" means that the regulatory agency has determined that the Air Basin does not meet the standard. "Unclassified" means that there is insufficient data to designate an area, or designations have yet to be made.

d California and federal standard attainment status based on SCAQMD's 2016 AQMP.

e An attainment re-designation request is pending.

Source (table): EcoTierra Consulting Inc., 2021.

ii) California Code of Regulations, Title 13, Section 2485 and Title 17, Section 93115

The California Code of Regulations (CCR) is the official compilation and publication of regulations adopted, amended, or repealed by the state agencies pursuant to the Administrative Procedure Act (APA). The CCR includes regulations that pertain to air quality emissions. Specifically, Section 2485 in Title 13 of the CCR states that the idling of all diesel-fueled commercial vehicles (weighing over 10,000 pounds) during construction shall be limited to 5 minutes at any location. In addition, Section 93115 in Title 17 of the CCR states that operation of any stationary, diesel-fueled, compression-ignition engines shall meet specified fuel and fuel additive requirements and emission standards.

*c) **Regional***

i) South Coast Air Quality Management District's Air Quality Management Plan

SCAQMD shares responsibility with the CARB for ensuring that all state and federal ambient air quality standards are achieved and maintained throughout the Air Basin.

To meet the CAAQS and NAAQS, SCAQMD has adopted a series of Air Quality Management Plans (AQMPs). The 2016 AQMP incorporates the Southern California Association of Governments' (SCAG) 2016–2040 Regional Transportation Plan/ Sustainable Communities Strategy (2016–2040 RTP/SCS) and updated emission inventory methodologies for various source categories. The 2016 AQMP also includes new federal requirements, implementation of new technology measures, and the continued development of economically sound, flexible compliance approaches.

The AQMP provides emissions inventories, ambient measurements, meteorological episodes, and air quality modeling tools. The AQMP also provides policies and measures to guide responsible agencies in achieving federal standards for healthful air quality in the Air Basin. It also incorporates a comprehensive strategy aimed at controlling pollution from all sources, including stationary sources, on-road and off-road mobile sources, and area sources.

SCAQMD has recently initiated the development of the 2022 AQMP to address the attainment of the 2015 8-hour ozone standard (70 ppb) for South Coast Air Basin and Coachella Valley. To support the development of mobile source strategies for the 2022 AQMP, South Coast AQMD, in conjunction with California Air Resources Board, has established Mobile Source Working Groups which are open to all interested parties.

ii) South Coast Air Quality Management District's Rule 403, Rule 1113, Rule 1403, and Regulations XIII

SCAQMD adopts rules and regulations to implement portions of the AQMP. Several of these rules and regulations apply to Project construction or operation and are discussed below:

- SCAQMD Rule 403 requires projects to incorporate fugitive dust control measures at least as effectively as the following measures:
  - Use watering to control dust generation during the demolition of structures;
  - Clean-up mud and dirt carried onto paved streets from the site;
  - Install wheel washers for all exiting trucks, or wash off the tires or tracks of all trucks and equipment leaving the site;
  - All haul trucks would be covered or would maintain at least 6 inches of freeboard;
  - All materials transported off-site shall be either sufficiently watered or securely covered to prevent excessive amounts of spillage or dust;
  - Suspend earthmoving operations or implement additional watering to meet Rule 403 criteria if wind gusts exceed 25 miles per hour; and

- The owner ort contractor shall keep the construction area sufficiently dampened to control dust caused by construction and hauling, and at all times provide reasonable control of dust caused by wind. All unpaved demolition and construction areas shall be wetted at least twice daily during excavation and construction, and temporary dust covers shall be used to reduce dust emissions.
- SCAQMD Rule 1113 limits the VOC content of architectural coatings.
- SCAQMD Rule 1403 requires owners and operators of any demolition or renovation activity and the associated disturbance of asbestos-containing materials, any asbestos storage facility, or any active waste disposal site to implement work practice requirements to limit asbestos emissions from building demolition and renovation activities, including the removal and associated disturbance of asbestos-containing materials.
- SCAQMD Regulation XIII, New Source Review, requires new on-site facility nitrogen oxide emissions to be minimized through the use of emission control measures (e.g., use of best available control technology for new combustion sources such as boilers, emergency generators, and water heaters).

iii) Southern California Association of Governments' 2016-2040 Regional Transportation Plan / Sustainable Communities Strategy

SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties, and addresses regional issues relating to transportation, the economy, community development, and the environment. SCAG coordinates with various air quality and transportation stakeholders in Southern California to ensure compliance with the federal and state air quality requirements, including applicable federal, state, and air district laws and regulations. As the federally designated Metropolitan Planning Organization (MPO) for the six-county Southern California region, SCAG is required by law to ensure that transportation activities "conform" to, and are supportive of, the goals of regional and state air quality plans to attain the NAAQS. In addition, SCAG is a co-producer, with SCAQMD, of the transportation strategy and transportation control measure sections of the 2016 AQMP. The development of the 2016 AQMP relies on population and transportation growth projections contained in SCAG's 2016–2040 RTP/SCS.

On September 3, 2020, SCAG approved and adopted the Connect SoCal 2020–2045 RTP/SCS. The RTP/SCS is currently pending certification by the California Air Resources Board (CARB). Similar to the 2016-2040 RTP/SCS, the newly adopted 2020-2045 RTP/SCS encompasses and builds upon and expands land use and transportation strategies established over several planning cycles to increase mobility options and achieve a more sustainable growth pattern. The plan lays out a strategy for the region to meet CARB greenhouse gas reduction targets at eight percent below 2005 per capita emissions levels by 2020, and 19 percent below 2005 per capita emissions levels by 2035. In addition, the plan anticipates a 25.7 percent decrease in time spent in traffic delay per capita and a five percent decrease in daily miles driven per capita from 2016 to 2045.

d) <u>Local</u>

i) City of Sierra Madre 2015 General Plan

The following are relevant objectives, policies, and implementation measures of the Sierra Madre General Plan and Implementation Program.

General Plan Policies

Resource Management Element – Air Quality Section

- Objective R22: Attaining safe air standards.
  - Policy R22.1: Cooperate with the South Coast Air Quality Management District and incorporate the provisions of the Air Quality Management Plan.
  - Policy R22.2: Prohibit the development of land uses and land use practices which would contribute significantly to poor air quality.
  - Policy R22.3: Establish controls and monitor uses in the City which contain operations or materials characterized by air pollutants which individually or cumulatively could significantly add to the air basin's degradation (e.g., furniture manufacturers using paints and finishes, and dry cleaners).
  - Policy R22.4: Encourage and participate in regional initiatives and programs to improve the South Coast Air Basin's air quality.
  - Policy R22.5: Publicize the incentives offered by the Southern California Air Quality Management District, such as leaf blower and lawnmower exchanges.
- Objective R23: Reducing the amount of vehicular emissions in Sierra Madre.
  - Policy R23.1: Establish a transportation system management program to encourage the use of transit, carpooling, shuttles and other transportation options to reduce vehicle miles traveled and vehicle trips.
  - Policy R23.2: Encourage public and school bus owners to convert to lower emission burning fuel, which is part of the Southern California Air Quality Management District Plan.
  - Policy R23.3: Continue to purchase automobiles and other vehicles that use zero or low emission fuels for the City's fleet of vehicles.
  - Policy R23.4: Allow for local job opportunities including home based businesses and telecommuting in Sierra Madre.
  - Policy R23.5: Provide opportunities through appropriate zoning for the development of residential units in concert with commercial uses.
  - Policy R23.6: Provide and enhance local transit service to reduce personal vehicle trips.
  - Policy R23.7: Maintain links to the MTA Gold Line light rail system.
  - Policy R23.8: Pursue funding sources for facilities and programs linked to regional transit,
- Objective R24: Reducing fugitive dust generated from the use of gardening equipment and construction activity.
  - Policy R24.1: Continue to review guidelines from time to time regarding the use of gas-powered lawn equipment, and consider tightening the restrictions on the type of equipment, hours and duration of operation.

- Policy R24.2: Require dust abatement measures during grading and construction operations. This may include use of reclaimed water or other methods to control fugitive dust.
- Policy R24.3: Develop and enforce a fugitive dust control ordinance that regulates the following: visible dust emissions, soil stabilization, the carrying and tracking of dirt offsite, unpaved access and haul roads, storage piles and bulk materials, demolition, and dust control plans; the ordinance should include penalties to encourage compliance.

- Objective R25: Reducing harmful secondhand smoke in living areas.
  - Policy R25.1: Consider developing an ordinance to address second-hand smoke and other indoor air pollutants in multiple-family dwelling units.

Implementation Program Measures

- Implementation Measure IM-1: The City shall ensure that it complies with the South Coast Air Quality Management District (SCAQMD) Air Quality Management Plan, and other regional initiatives and programs to improve air quality.
- Implementation Measure IM-2: The City shall continue to assess the air quality impacts from proposed developments and land uses through the environmental review process.
- Implementation Measure IM-3: The City shall continue to abide by the requirements of the South Coast Air Quality Management District (SCAQMD) regarding air pollutant thresholds.
- Implementation Measure IM-4: Staff shall keep apprised of incentives offered by the South Coast Air Quality Management District (SCAQMD) and shall provide that information to the community.
- Implementation Measure IM-5: The City shall purchase low or zero emissions alternate fuel vehicles for its fleet wherever possible.
- Implementation Measure IM-6: The City shall create a transportation brochure to provide the public with multiple options for reducing miles traveled and vehicle trips.
- Implementation Measure IM-7: The City shall continue to allow home-based businesses pursuant to the Home Occupation Permit Ordinance.
- Implementation Measure IM-8: The City shall continue to allow residential business above or at the rear of commercial uses in the Commercial Zone.
- Implementation Measure IM-9: The City shall continue to provide the fixed route local transportation services and provide increase social media marketing for greater public awareness.
- Implementation Measure IM-10: The City shall continue to partner with MTA and attend quarterly meetings to ensure access to the Gold Line light rail system.
- Implementation Measure IM-11: The City shall partner with regional transit providers to identify funding sources to expand transportation programs.
- Implementation Measure IM-12: The City shall continue to enforce the Noise Ordinance and amend as necessary with respect to the use of gas-powered lawn equipment.

- Implementation Measure IM-13: The City shall continue to enforce dust abatement measures during grading and construction.
- Implementation Measure IM-14: The City shall continue to enforce applicable City ordinances, as well as regional regulations pertaining to fugitive dust control.
- Implementation Measure IM-15: Staff shall research and review adopted second-unit smoke ordinances and present the results to the Planning Commission and City Council for their consideration as to whether they wish to adopt a second-unit smoke ordinance.

2) *Toxic Air Contaminants*

a) State

i) Assembly Bill 1807

The California Air Toxics Program was established in 1983, when the California Legislature adopted Assembly Bill (AB) 1807 to establish a two-step process of risk identification and risk management to address potential health effects from exposure to toxic substances in the air. In the risk identification step, CARB and OEHHA determine if a substance should be formally identified, or "listed," as a TAC in California. Since inception of the program, a number of such substances have been listed and include benzene, chloroform, formaldehyde, and particulate emissions from diesel-fueled engines, among others.[4] In 1993, the California Legislature amended the program to identify the 189 federal hazardous air pollutants (HAPs) as TACs.

In the risk management step, CARB reviews emission sources of an identified TAC to determine whether regulatory action is needed to reduce risk. Based on results of that review, CARB has promulgated a number of airborne toxic control measures (ATCMs), both for mobile and stationary sources. In 2004, CARB adopted an ATCM to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to diesel PM and other TACs. The measure applies to diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. This measure does not allow diesel-fueled commercial vehicles to idle for more than 5 minutes at any given time.

In addition to limiting exhaust from idling trucks, CARB adopted regulations on July 26, 2007 for off-road diesel construction equipment such as bulldozers, loaders, backhoes, and forklifts, as well as many other self-propelled, off-road diesel vehicles to reduce emissions by installation of diesel particulate filters and encouraging the replacement of older, dirtier engines with newer emission-controlled models. Implementation is staggered based on fleet size, with the largest operators beginning compliance in 2014.[5]

The AB 1807 program is supplemented by the AB 2588 Air Toxics "Hot Spots" program, which was established by the California Legislature in 1987. Under this program, facilities are required to report their air toxics emissions, assess health risks, and notify nearby residents and workers of significant risks, if

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[4] *California Air Resources Board, Toxic Air Contaminant Identification Reports, pursuant to Assembly Bill 1807: Stats. 1983, Ch. 1047; Health and Safety Code section 39650 et seq., Food and Agriculture Code Section 14021 et seq.*

[5] *California Air Resources Board, Construction and Earthmoving Equipment Website, accessed: August 6, 2020.*

present. In 1992, the AB 2588 program was amended by Senate Bill (SB) 1731 to require facilities that pose a significant health risk to the community to reduce their risk through implementation of a risk management plan.

D. Existing Conditions

1) *Regional Air Quality*

Ambient air quality is determined primarily by the type and amount of pollutants emitted into the atmosphere, as well as the size, topography, and meteorological conditions of a geographic area. The Basin has low mixing heights and light winds, which help to accumulate air pollutants. Exhaust emissions from mobile sources generate the majority of ROG, CO, NO_x, and SO_x both in the Basin generally and specifically the Los Angeles County portion of the Basin. Area-wide sources generate the most airborne particulates (i.e., PM_{10} and $PM_{2.5}$) in both the Basin and Los Angeles County. Measurements of ambient concentrations of the criteria pollutants are used by the U.S. EPA and the CARB to assess and classify the air quality of each air basin, county, or, in some cases, a specific urbanized area. The classification is determined by comparing actual monitoring data with national and State standards. If a pollutant concentration in an area is lower than the standard, the area is classified as being in "attainment." If the pollutant exceeds the standard, the area is classified as a "non-attainment" area. If there is not enough data available to determine whether the standard is exceeded in an area, the area is designated "unclassified."

The U.S. EPA and the CARB use different standards for determining whether the Basin is in attainment. Federal and State standards were previously summarized in **Table IV.B-2, Ambient Air Quality Standards**. The attainment status for the Los Angeles County portion of the Basin with regard to the national ambient air quality standards (NAAQS) and California ambient air quality standards (CAAQS) are shown in **Table IV.B-3, Attainment Status for the South Coast Air Basin (Los Angeles County Portion)**.

Table IV.B-3
Attainment Status for the South Coast Air Basin
(Los Angeles County Portion)

Pollutant	Attainment Status	
	NAAQS	CAAQS
Ozone (1-Hour)	Non-Attainment (Extreme)	Non-Attainment
Ozone (8-Hour)	Pending – Expect Non-Attainment (Extreme)	Non-Attainment
Carbon Monoxide (1- & 8-hour)	Attainment (Maintenance)	Attainment
Nitrogen Dioxide (1-Hour)	Unclassifiable/Attainment	Attainment
Nitrogen Dioxide (Annual)	Attainment (Maintenance)	Attainment
Sulfur Dioxide (1-Hour)	Designations Pending (expect Unclassified/Attainment)	Attainment
Sulfur Dioxide (24-Hour & Annual)	Unclassified/Attainment	Attainment
PM_{10} (24-Hour)	Attainment (Maintenance)	Non-Attainment
PM_{10} (Annual)	N/A	Non-Attainment
$PM_{2.5}$ (24-Hour)	Non-Attainment (Serious)	N/A
$PM_{2.5}$ (Annual)	Non-Attainment (Moderate)	Non-Attainment
Lead	Non-Attainment (Partial)	Attainment

Source: South Coast Air Quality Management District, Air Quality Management Plan Appendix II website: http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/appendix-ii.pdf?sfvrsn=4, accessed: June 2021. Federal Nonattainment Areas for

Table IV.B-3
Attainment Status for the South Coast Air Basin
(Los Angeles County Portion)

Pollutant	Attainment Status	
	NAAQS	CAAQS
Criteria Pollutants (Green Book), website: https://www.epa.gov/green-book: accessed June 2021. Area Designation Maps/State and National, website: https://ww3.arb.ca.gov/desig/adm/adm.htm: accessed June 2021.		

2) *Local Air Quality*

The SCAQMD divides the Basin into 38 source receptor areas (SRAs), wherein 38 monitoring stations operate to monitor the various concentrations of air pollutants in the region. The City is primarily within SRA 9 – East San Gabriel Valley. The Azusa Monitoring Station best represents the ambient air quality within the City. This station monitors emission levels of O_3, NO_2, PM_{10}, and $PM_{2.5}$. Data from these stations are summarized in **Table IV.B-4, Summary of Ambient Air Quality in the Project Vicinity**. The data show that the area regularly exceeds the state and federal eight-hour O_3 standards, the state one-hour O_3 standard, and the state PM_{10} standard. The federal $PM_{2.5}$ standard is also occasionally exceeded. The state NO_2 standards have not been exceeded in the last five years in the project vicinity.

Table IV.B-4
Summary of Ambient Air Quality in the Project Vicinity

Air Pollutants Monitored Within SRA 9 (East San Gabriel Valley)	Number of Days Thresholds Were Exceeded and Maximum Levels During Such Exceedances				
	2015	2016	2017	2018	2019
Ozone (O_3)					
State 1-Hour > 0.09 ppm	21	30	38	24	34
State 8-Hour > 0.07 ppm	27	39	62	42	39
Federal 8-Hour > 0.07 ppm	27	39	62	42	39
Maximum 1-Hour Concentration (ppm)	0.122	0.146	0.152	0.139	0.123
Maximum 8-Hour Concentration (ppm)	0.096	0.106	0.114	0.099	0.094
Coarse Particulates (PM_{10})					
State 24-Hour > 50 µg/m^3	12	12	7	10	4
Federal 24-Hour > 150 µg/m^3	0	0	0	0	0
Maximum 24-Hour Concentration (µg/m^3)	101.0	74.0	83.9	78.3	82.0
Fine Particulates ($PM_{2.5}$)					
Federal 24-Hour > 35 µg/m^3	2	0	0	1	1
Maximum 24-Hour Concentration (µg/m^3)	70.3	32.1	24.9	41.8	70.3
Nitrogen Dioxide (NO_2)					
State 1-Hour > 0.18 ppm	0	0	0	0	0
Maximum 1-Hour Concentration (ppm)	0.071	0.0742	0.0656	0.078	0.0597

ppm = parts by volume per million of air
ppb = parts by volume per billion of air
µg/m^3=micrograms per cubic meter
n/a = data not available or not collected by the District
** Means there was insufficient data available to determine value.*
Source: https://www.arb.ca.gov/adam/topfour/topfour1.php, accessed: June 2021.

3) *Sensitive Receptors*

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardiorespiratory diseases.

Residential areas are also considered sensitive receptors to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Other sensitive receptors include retirement facilities, hospitals, and schools. Recreational land uses are considered moderately sensitive to air pollution. Although exposure periods are generally short, exercise places a high demand on respiratory functions, which can be impaired by air pollution. In additions, noticeable air pollution can detract from the enjoyment of recreations. Industrial, commercial, retail, and office areas are considered the least sensitive to air pollution. Exposure periods are relatively short and intermittent, as the majority of the workers tend to stay indoors most of the time. In addition, the working population is generally the healthiest segment of the public.

Site 1

Site 1 is located at the northeast corner of Lima Street and Mariposa Avenue. The nearest sensitive receptors include the single-family residential dwelling units located approximately 60 feet to the east (across Lima Street) and 60 feet south (across Mariposa Avenue) of the project site.

Site 2

Site 2 is located along the southern side of Suffolk Avenue between Baldwin Avenue and Sierra Place. The nearest sensitive receptors include the single-family residential uses located adjacent to the east and south of the site. In addition, multi-family residential uses located approximately 60 feet north (across Suffolk Avenue) and the single-family residential uses located approximately 75 feet west of the site (across Baldwin Avenue).

Site 3

Site 3 is located at 491 W Sierra Madre Boulevard. The nearest sensitive receptors to Site 3 include the single-family residential uses located adjacent to the north and the multi-family residential uses located adjacent to the east and west and approximately 80 feet south (across Sierra Madre Boulevard).

Site 4

Site 4 is located at 215 N Baldwin Avenue. The nearest sensitive receptors to Site 4 include the single-family and multi-family residential uses located adjacent to the south and east of the project site. In addition, single-family residential uses are located approximately 50 feet north (across W Laurel Avenue) and a Gooden School is located approximately 75 feet southeast (across Baldwin Avenue) of the project site.

Site A

Site A is located within a portion of the property associated with the St. Rita Catholic Church and School. The nearest sensitive receptors include the school associated with the St. Rita Catholic Church which is located adjacent to the northeast and the single-family residential uses located adjacent to the east of the project site. Single-family and multi-family residential uses are also located approximately 60 feet south (across Grandview Avenue) and 60 feet north (across Alegria Avenue) of Site A.

Site B

Site B is located at 695 W Sierra Madre Boulevard within a portion of the property associated with the United Methodist Church. The nearest sensitive receptors to Site B include the single-family residential use located adjacent to the east and the multi-family residential uses located adjacent to the southeast. In addition, single-family residential uses are located approximately 55 feet north (across Montecito Avenue) of the project site.

Site C

Site C is located within a portion of the property associated with Old North Church. The nearest sensitive receptors to Site C include the single-family residential uses located adjacent to the north and east of the project site. Multi-family and single-family residential uses are located approximately 50 feet west (across Hermosa Avenue) and multi-family residential uses are also located approximately 75 feet east of the project site.

Site D

Site D is located within a portion of the property associated with Bethany Church. The nearest sensitive receptors to Site D include the multi-family residential uses located adjacent to the west and the single-family residential use adjacent to the southeast of the project site. In addition, single-family residential uses are located approximately 60 feet north (across Highland Avenue) and 40 feet south (across Montecito Avenue).

The Meadows

The Meadows is located within the lower 20 acres of the existing Mater Dolorosa Passionist Retreat Center property. The nearest sensitive receptors to The Meadows include the single-family residential uses located adjacent to the west, south, and southeast of the project site.

Stonegate

Stonegate is part of the One Carter property located at the northern terminus of North Baldwin Avenue. The nearest sensitive receptors to Stonegate include the single-family residential uses located adjacent to the west, south, and east of the project site.

All other sensitive receptors in the project site vicinity would be located at further distances and would have lower air quality emissions impacts.

3. ENVIRONMENTAL IMPACTS AND MITIGATIONS

A. Threshold of Significance

Appendix G of the CEQA Guidelines provides a screening questions that address impacts on air quality. Specifically, the Guidelines state that the proposed project may have an adverse significant air quality impact if it would:

a) Conflict with or obstruct implementation of the applicable air quality plan;
b) 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;
c) Expose sensitive receptors to substantial pollutant concentrations; or

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

B. Project Impacts and Mitigation Measures

Impact B-1: Would the Project conflict with or obstruct implementation of the applicable air quality plan?

Impact Analysis:

The California Environmental Quality Act (CEQA) requires a discussion of any inconsistencies between a proposed project and applicable General Plans and Regional Plans (CEQA Guidelines Section 15125). The regional plan that applies to the proposed project includes the SCAQMD Air Quality Management Plan (AQMP). Therefore, this section discusses any potential inconsistencies of the proposed project with the AQMP.

Consistency with the AQMP assumptions is determined by performing an analysis of the proposed project with the assumptions in the AQMP. The emphasis of this criterion is to ensure that the analyses conducted for the proposed project are based on the same forecasts as the AQMP. The AQMP strategy is based on projections from local general plans. Therefore, for this project, the City of Sierra Madre Land Use Plans define the assumptions that are represented in the AQMP.

The proposed project is that of the City of Sierra Madre Housing Element and requires amending the City's General Plan designations on proposed Housing Element opportunity sites, which requires revisions to the Land Use Element and Land Use Map of the City of Sierra Madre General Plan. As the Housing Element necessitates rezoning of some proposed opportunity sites it also includes changes to the City's Zoning Code and Zoning Map. The increased density of residential units accommodated under the Housing Element is in response to SCAG developing a Regional Housing Needs Allocation (RHNA) for the City of Sierra Madre for the City's 2021-2029 Housing Element planning period. The City's total RHNA for the 2021-2029 planning period is 204 units. As the City of Sierra Madre does not currently have an adequate number of sites with zoning in place to meet the RHNA requirements, the City identified possible housing sites to address Sierra Madre's RHNA obligation. These identified sites constitute the future development identified in the Housing Element.

As the Housing Element includes increased residential density at the identified opportunity sites, the estimated population for these sites would be higher than the population forecasted for these sites in the 2015 General Plan Update. Although the Housing Element would result in slightly higher population than those estimated in the 2015 General Plan Update, the increased residential density of the future development of the Housing Element is in response to SCAG forecasts in relation to the City's RHNA. Furthermore, SCAG's Regional Council recently approved and fully adopted the Connect SoCal (2020–2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)) and the addendum to the Connect SoCal Program Environmental Impact Report in September 2020. Although the 2016 AQMP does not include the emissions of the additional population growth associated with the Housing Element, as the AQMP is based on population, employment, and VMT in the South Coast Air Basin region as projected by SCAG and operation of the new land uses associated with the Housing Element would not cumulatively contribute to the nonattainment designations of the South Coast Air Basin, the Housing Element is considered to be consistent with the AQMP.

Based on the above, the future development associated with the Housing Element will not result in an inconsistency with the SCAQMD AQMP. Therefore, a less than significant impact will occur.

Comparison of Significance to the General Plan EIR

The General Plan EIR determined that implementation of the 2015 General Plan Update would be consistent with the South Coast Air Quality Management District (SCAQMD) Air Quality Management Plan, as buildout of the 2015 General Plan Update would not exceed the current overall Southern California Association of Governments (SCAG) service population estimates and would not cumulatively contribute to the nonattainment designations of the South Coast Air Basin (Basin). Although the 2015 General Plan Update resulted in slightly higher population than SCAG projections, SCAG projections for the City were based on the 1996 Sierra Madre General Plan and as a result, SCAG growth projections and the associated emissions inventory in SCAQMD's Air Quality Management Plan (AQMD) did not include the additional population growth forecasted in the 2015 General Plan Update. In addition, the General Plan EIR found that operation of the new land uses associated with the 2015 General Plan Update would not cumulatively contribute to the nonattainment designations of Basin and the 2015 General Plan Update would be consistent with the AQMP and impacts would not be significant.

As discussed above, as the AQMP is based on population, employment, and VMT in the South Coast Air Basin region, as projected by SCAG, and the increased residential density of the future development of the Housing Element is in response to SCAG forecasts, the Housing Element is considered to be consistent with SCAG and, therefore, consistent with the AQMP. In addition, operation of the future development associated with the Housing Element would not cumulatively contribute to the nonattainment designations of Basin and impacts would not be significant.

Therefore, the Housing Element resulted in less than significant impacts and would, therefore, not result in increased impacts as was determined under the 2015 General Plan Update.

Mitigation Measures:

None required.

Impact B-2: 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?

Impact Analysis:

Construction Related Impacts

Construction activities associated with the future development of the Housing Element would occur over buildout of the Housing Plan, which includes the year 2021 through 2029, and would cause short-term emission of criteria air pollutants. The primary source of NOx, CO, and Sox emissions is the operation of construction equipment. The primary sources of particulate matter (PM_{10} and $PM_{2.5}$) emissions are activities that disturb the soil, such as grading and excavation, road construction, and building demolition and construction. The primary source of VOC emissions is the application of architectural coatings and off-gas emissions associated with asphalt paving.

Information regarding each specific development project accommodated under the Housing Element (such as construction timeline, earthworks information, amount and type of construction equipment etc.) would be needed in order to quantify the level of impact associated with construction activity. Due to the scale of development activity associated with the future development accommodated under the Housing Element, emissions could exceed the SCAQMD regional significance thresholds.

The air quality emission related to construction must be addressed on a project-by-project level basis. For this broad-based policy level analysis developed for the Housing Element, it is not possible to determine whether the scale and phasing of individual development projects would exceed the SCAQMD's short-term regional or localized construction emissions thresholds. Construction activities associated with the buildout of the future development of the Housing Element are anticipated to occur sporadically over an approximately 9-year period (i.e., 2021-2029) or longer. Future development would be comprised of multiple smaller development projects, each having its own construction timeline and activities. Development of multiple properties could occur at the same time. Construction activities would temporarily increase PM_{10}, $PM_{2.5}$, VOC, NO_x, So_x, and CO regional emission with the South Coast Air Basin.

The individual construction projects would be subject to regulatory measures including Rule 403 for fugitive dust control, Rule 1113 for architectural coatings, and other applicable SCAQMD regulatory measures. In addition, potential mitigation could be imposed at the project level including extension of construction schedules and/or use of special equipment etc. In addition to compliance with SCAQMD rules, the construction activity associated with each individual project would also be subject to all applicable policies and implementation measures contained in the General Plan Update. Although adherence to applicable regulations and policies would contribute to minimizing construction-related criteria air pollutant emission, it is still possible that some of the new development projects that would be accommodated under the Housing Element could exceed relevant SCAQMD significance thresholds. Therefore, construction-related air quality impacts associate with the future development of the Housing Element would be significant.

Operational Impacts

The operations-related criteria air quality impacts created by the future development accommodated under the Housing Element have been analyzed through the use of CalEEMod model and are provided below in Table IV.B-4. The operating emissions were based on the buildout year of the Housing Element, year 2029.

Table IV.B-4 provides the unmitigated operational emissions associated with the future development accommodated under the Housing Element, the unmitigated operational emissions of the existing uses, and the operational emissions associated with the buildout of the sites under the General Plan Update. A comparison of the operational emissions under the Housing Element to both the existing emissions and the General Plan Update emissions is also provided in Table IV.B-4. The emissions associated with the future development accommodated under the Housing Element do not exceed the SCAQMD daily emission threshold. Respectively, the net increase associated with the Housing Plan from both the Existing scenario and the 2015 General Plan Update scenario is also under SCAQMD thresholds. Therefore, regional operational emissions are considered to be less than significant.

Table IV.B-5
Regional Significance - Unmitigated Operational Emissions (lbs/day)

Activity	Pollutant Emissions (pounds/day)[1]					
	VOC	NOx	CO	SO2	PM10	PM2.5
Existing						
Area Sources[2]	1.90	0.89	4.98	0.01	0.09	0.09
Energy Usage[3]	0.03	0.23	0.10	0.00	0.02	0.02
Mobile Sources[4]	2.46	2.38	23.29	0.05	6.20	1.67
Total Emissions	**4.39**	**3.50**	**28.37**	**0.06**	**6.31**	**1.79**
2015 General Plan Update						
Area Sources[2]	5.44	2.52	14.13	0.02	0.26	0.26
Energy Usage[3]	0.09	0.81	0.35	0.01	0.07	0.07
Mobile Sources[4]	6.52	5.92	62.76	0.14	16.88	4.56
Total Emissions	**12.05**	**9.26**	**77.24**	**0.16**	**17.21**	**4.89**
Proposed Housing Element						
Area Sources[2]	9.81	5.32	29.74	0.03	0.56	0.56
Energy Usage[3]	0.18	1.51	0.64	0.01	0.12	0.12
Mobile Sources[4]	13.67	12.95	126.12	0.28	33.10	8.94
Total Emissions	**23.66**	**19.78**	**156.50**	**0.32**	**33.78**	**9.62**
Net Increase of Proposed Housing Element compared to Existing Uses	**19.27**	**16.28**	**128.13**	**0.26**	**27.47**	**7.83**
Net Increase of Proposed Housing Element compared to 2015 General Plan Update Uses	**11.61**	**10.52**	**79.26**	**0.16**	**16.57**	**4.73**
SCAQMD Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Exceeds Threshold?	No	No	No	No	No	No

Notes:
[1] Source: CalEEMod Version 2020.4.0. Based on highest winter or summer emissions using Year 2029 emission rates.
[2] Area sources consist of emissions from consumer products, architectural coatings, and landscaping equipment.
[3] Energy usage consists of emissions from on-site natural gas usage.
[4] Mobile sources consist of emissions from vehicles and road dust.

Comparison of Significance to the General Plan EIR

Construction

The General Plan EIR determined that construction activities associated with future development that would be accommodated under the 2015 General Plan Update would generate short-term emissions in exceedance of SCAQMD's threshold criteria and cumulatively contribute to the nonattainment designations of the Basin. Air quality emissions related to future development under the 2015 General Plan Update must be addressed on a project-by-project basis and would be subject to regulatory measures, rules, and policies, as well as project-specific mitigation measures and implementation measures; however, it is possible that some of the new development projects that would be accommodated by the 2015 General Plan Update could exceed relevant SCAQMD significance thresholds and cumulative contribute to the nonattainment designations of the Basin for O_3 and particulate matter (PM_{10} and $PM_{2.5}$). Therefore, construction-related air quality impacts would be significant. Furthermore, because cumulative development within the City would exceed the regional significance thresholds, the General Plan EIR found that the 2015 General Plan Update could contribute to an increase in health effects in the basin until such time the attainment standards are met in the Basin.

As shown in the analyses above, construction activities associated with the future development of the Housing Element would also generate short-term emissions in exceedance of SCAQMD's threshold criteria and cumulatively contribute to the nonattainment designations of the Basin. Air quality emissions related to future development under the Housing Element must be addressed on a project-by-project basis and would be subject to regulatory measures, rules, and policies, as well as project-specific mitigation measures and implementation measures; however, it is possible that some of the new development projects that would be accommodated by the Housing Element could exceed relevant SCAQMD significance thresholds and cumulative contribute to the nonattainment designations of the Basin. Therefore, construction-related air quality impacts would be significant.

Therefore, the Housing Element would result in not result in an increase significance level than that which was previously identified by the 2015 General Plan Update.

Operation

The General Plan EIR determined that implementation of the 2015 General Plan Update would not result in operational-phase criteria air pollutant emissions that would exceed SCAQMD's regional significance thresholds. In addition, implementation of the policies and implementation measures of the 2015 General Plan Update and Implementation Programs, respectively, would contribute to reducing air quality emissions. Therefore, operational air quality impacts associated with future development of the 2015 General Plan Update would not be significant. Furthermore, the General Plan EIR found that as cumulative development within the City would not exceed the regional significance thresholds, the 2015 General Plan Update would not substantially cumulatively contribute to the nonattainment designations of Basin or contribute to an increase in health effects in the basin.

The emissions associated with the General Plan Housing Element would also not result in operational-phase criteria pollutant emissions that would exceed the SCAQMD's regional significance thresholds. Furthermore, the future development accommodated under the Housing Element would also be subject to the policies and implementation measures identified in the General Plan that are aimed at reducing air quality emissions. Therefore, the General Plan Housing Element would result in a less than significant impacts and would not result in higher impacts than that which was determined under the 2015 General Plan Update.

Mitigation Measures:

AQ-1: GP EIR MM 2-1.

If, during subsequent project-level environmental review conducted for individual development projects, construction-related criteria air pollutants are determined to have the potential to exceed the South Coast Air Quality Management District (SCAQMD) adopted thresholds of significance, the City of Sierra Madre Planning and Community Preservation Department shall require that applicants for new development projects incorporate mitigation measures as identified in the CEQA document prepared for the project to reduce air pollutant emissions during construction activities. Mitigation measures that may be identified during the environmental review include but are not limited to:

- Using construction equipment rated by the United States Environmental Protection Agency as having Tier 3 (model year 2006 or newer) or Tier 4 (model year 2008 or newer) emission limits, applicable to engines between 50 and 750 horsepower.
- Ensuring construction equipment is properly serviced and maintained to the manufacturer's standards.

- Limiting nonessential idling of construction equipment to no more than five consecutive minutes.
- Water all active construction areas at least three times daily, or as often as needed to control dust emissions. Watering should be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water should be used whenever possible.
- Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard (i.e., the minimum required spaced between the top of the load and the top of the trailer).
- Pave, apply water three times daily or as often as necessary to control dust, or apply (non-toxic) soil stabilizer on all unpaved access roads, parking areas, and staging areas at construction sites.
- Sweep daily (with water sweepers using reclaimed water if possible), or as often as needed, all paved access roads, parking areas, and staging areas at the construction site to control dust.
- Sweep public streets daily (with water sweepers using reclaimed water if possible) in the vicinity of the project site, or as often as needed, to keep streets free of visible soil material.
- Hydroseed or apply non-toxic soil stabilizers to inactive construction areas.
- Enclose, cover, water three times daily, or apply non-toxic soil binders to exposed stockpiles (dirt, sand, etc.)

Impact B-3: Would the project expose sensitive receptors to substantial pollutant concentrations?

Impact Analysis:

Toxic Air Contaminants

The future development accommodated under the Housing Element includes that of residential uses at higher densities than existing. Residential uses are not considered to be uses that would generate significant toxic air contaminant emissions. Therefore, the impact is considered less than significant.

However, as the future development of the Housing Element itself includes sensitive receptors, if sited within close proximity to stationary source, they may be exposed to significant concentration of air pollutants. CARB developed and approved the *Air Quality and Land Use Handbook: A Community Perspective (2005)* to address the siting of sensitive land uses in the vicinity of freeways, distribution centers, rail yards, ports, refineries, chrome-plating facilities, dry cleaners, and gasoline-dispensing facilities. This guidance document was developed to assess compatibility and associated health risks when placing sensitive receptors near existing pollution sources. Based on the General Plan Zoning Map, none of the opportunity site identified in the Housing Element are located in close proximity to land uses identified by CARB as being potential air pollutant sources. Therefore, air quality impacts from placement of sensitive uses near major pollutant sources are considered less than significant.

Localized Significance Thresholds

Localized Significance Thresholds (LSTs) are the amount of project-related emissions at which localized concentrations could exceed the AAQS for criteria pollutants for which the South Coast Air Basin is designated nonattainment. SCAQMD LSTs to determine if emissions of NO2, CO, PM10, and PM2.5

generated at a project site (offsite mobile-source emissions are not included in the LST analysis) would expose sensitive receptors to substantial concentrations of criteria air pollutants.

Construction Related

Per the LST methodology, information regarding specific development projects and the location of receptors would be need in order to quantify the levels of impact associated with future development projects. Thus, as the Housing Element is a plan level analysis, it is not possible to calculate individual project-related localized emissions at this time. Air quality emissions would be addressed on a project-by-project basis as individual development projects are considered.

Furthermore, in accordance with SCAQMD's LST methodology, construction LSTs are based on the acreage disturbed per day based on equipment use. However, an LST analysis for construction-related localized impacts can only be conducted at a project level, and quantification of LSTs is not applicable for this program-level analysis. Therefore, as it is not possible to calculate individual project-related emissions at this time and determine whether the scale and phasing of individual projects would result in the exceedance of localized emissions thresholds, air quality emissions associated with the development activity of the buildout of the Housing Element could exceed the SCAQMD regional significance thresholds, and therefore, in accordance with SCAQMD methodology may result in significant localized impacts and exceed the AAQS. Therefore, it is considered a significant impact.

Operations Related

Project-related air emissions from on-site sources such as architectural coatings, landscaping equipment, on-site usage of natural gas appliances as well as the operation of vehicles on-site may have the potential to exceed the State and Federal air quality standards in the project vicinity, even though these pollutant emissions may not be significant enough to create a regional impact to the Air Basin.

According to SCAQMD LST methodology, LSTs would apply to the operational phase of a project, if the project includes stationary sources, or attracts mobile sources (such as heavy-duty trucks) that may spend long periods queuing and idling at the site; such as industrial warehouse/transfer facilities. The proposed project includes the updating of the general plan zoning under the Housing Element to include an increased number of residential uses and does not include such uses. Therefore, due to the lack of stationary source emissions, no long-term localized significance threshold analysis was warranted and impacts are considered less than significant.

CO Hot Spots

CO is the pollutant of major concern along roadways because the most notable source of CO is motor vehicles. For this reason, CO concentrations are usually indicative of the local air quality generated by a roadway network and are used as an indicator of potential local air quality impacts.

To determine if the proposed project could cause emission levels in excess of the CO standards discussed above in Section 5.0, a sensitivity analysis is typically conducted to determine the potential for CO "hot spots" at a number of intersections in the general project vicinity. Because of reduced speeds and vehicle queuing, "hot spots" potentially can occur at high traffic volume intersections with a Level of Service E or worse.

Micro-scale air quality emissions have traditionally been analyzed in environmental documents where the air basin was a non-attainment area for CO. However, the SCAQMD has demonstrated in the CO attainment redesignation request to EPA that there are no "hot spots" anywhere in the air basin, even at intersections with much higher volumes, much worse congestion, and much higher background CO levels than anywhere in Los Angeles County. If the worst-case intersections in the air basin have no "hot spot" potential, any local impacts will be below thresholds.

The trip generation provided by Gibson Transportation Consulting, Inc. showed that the existing uses of the site's to be re-zoned under the Housing Element currently generate 528 average daily trips with 186 trips during the AM peak hour and 249 trips during the PM Peak hour. In addition, the future development associated with the Housing Element would generate 3,026 average daily trips with 229 trips during the AM peak hour and 305 trips during the PM peak hour. Utilizing the multi-family and single-family trip generation rates provided by Gibson Transportation Consulting, Inc. it can be assumed that buildout of the sites under the designations of the 2015 General Plan Update would have approximately 1,164 daily vehicle trips. The 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan) showed that an intersection which has a daily traffic volume of approximately 100,000 vehicles per day would not violate the CO standard. The volume of traffic associated with the future development of the Housing Element would be well below 100,000 vehicles and below the necessary volume to even get close to causing a violation of the CO standard. Therefore, buildout of the Housing Element would not produce the volume of traffic required to generate a CO hotspot and CO hotspots are not an environmental impact of concern.

Conclusions

Therefore, due to the potential of the future development of the Housing Element to exceed construction-related localized significance thresholds, impacts are considered significant, and mitigation is required.

Comparison of Significance to the General Plan EIR

The General Plan EIR determined that implementation of the 2015 General Plan Update could result in new sources of criteria air pollutant emissions and toxic air contaminants that could expose sensitive receptors to substantial pollutant concentrations including Toxic Air Contaminants from light industrial and commercial processes as well as trucks and off-road equipment. Emissions from industrial and commercial uses would be controlled by SCAQMD through permitting and would be subject to further study and health risk assessment prior to issuance of air quality permits and implementation of 2015 General Plan Update policies and implementation measures would contribute to minimizing air quality impacts to both stationary and mobile uses, however until specific development projects are proposed and air quality modeling can be performed, impacts are considered to be significant. However, the General Plan EIR found that CO hotspots would not be an environmental impact of concern for the 2015 General Plan Update. The General Plan EIR determined that buildout of the 2015 General Plan Update could site sensitive land uses in proximity to air pollution sources and expose sensitive receptors to substantial pollutant concentrations. Therefore, air quality impacts from placement of sensitive uses near new major pollutant sources would be significant.

The land uses analyzed as part of the General Plan Housing Element are all sites within the City that are to be re-zoned for higher residential densities. Therefore, the land use and zoning changes associated with the General Plan Housing Element would not be anticipated to expose sensitive receptors to substantial pollutant concentrations of Toxic Air Contaminants. In addition, in regards to CO hotspots, no significant long-term air quality impact is anticipated to local air quality with the on-going use of the General Plan Housing Element. Therefore, the General Plan Housing Element would result in a less than significant

impact in regards to toxic air contaminants and would result in lower impacts than that which was determined under the 2015 General Plan.

Mitigation Measures:

See AQ-1: GP EIR MM 2-1 under Impact B-2.

Impact B-4: Would the Project result in other emissions (such as those leading to odors) affecting a substantial number of people?

Impact Analysis:

The SCAQMD recommends that operational odor impacts be addressed in a qualitative manner. Such an analysis shall determine whether the project would result in excessive nuisance odors, as defined under the California Code of Regulations and Section 41700 of the California Health and Safety Code, and thus would constitute a public nuisance related to air quality.

Growth within the City of Sierra Madre could generate new sources of odors and place sensitive receptors near existing sources of odors. The SCAQMD CEQA Handbook states that an odor impact would occur if a project causes an odor nuisance pursuant to SCAQMD Rule 402, which states:

> A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. The provisions of this rule shall not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.

Potential sources that may emit odors during construction activities of future development accommodated under the Housing Element include the application of materials such as asphalt pavement and architectural coatings and construction equipment exhaust. The objectionable odors that may be produced during the construction process are of short-term in nature and the odor emissions are expected cease upon the drying or hardening of the odor producing materials. Diesel exhaust and VOCs would be emitted during construction of the project, which are objectionable to some; however, emissions would disperse rapidly from the project site and therefore should not reach an objectionable level at the nearest sensitive receptors. Therefore, due to the short-term nature and limited amounts of odor producing materials, impacts associated with construction-generated odors are considered to be less than significant.

Land uses typically considered to be associated with odors include, but are not limited to, agricultural operations, chemical plants, composting operations, dairies, fiberglass molding, landfills, refineries, rendering plants, rail yards, and wastewater treatment plants.[6] The future development associated with the Housing Element does not contain land uses typically associated with emitting objectionable odors. The Housing Element includes residential land uses which have the potential to generate odors from such activities such as exhaust from landscaping equipment; however, residential uses are not considered potential generators of odors that could affect a substantial number of people. Therefore, impacts from potential odors from residential land uses are considered to be less than significant.

[6] *http://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/complete-guidance-document.pdf?sfvrsn=4*

Comparison of Significance to the General Plan EIR

The General Plan EIR determined that light-manufacturing land uses that would be accommodated under the 2015 General Plan Update could create objectionable odors and impacts could be significant. However, the General Plan EIR found that residential and commercial land uses and construction activities associated with the 2015 General Plan Update would not generate substantial odors and impacts would not be significant.

As stated previously, the future development analyzed for the General Plan Housing Element includes only that of residential uses. Residential uses are not considered potential generators of odors that could affect a substantial number of people. Therefore, impacts from potential odors from the operational of the future development associated with the General Plan Housing Element are considered to be less than significant. Furthermore, due to the short-term nature and limited amounts of odor producing materials, impacts associated with construction-generated odors are also considered to be less than significant.

Therefore, the General Plan Housing Element would result in a less than significant impact in regards to odors and would not result in increased significance levels from those identified under the General Plan EIR.

Mitigation Measures:

None required.

1. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Implementation of AQ-1: GP EIR MM 2-1 would reduce criteria air pollutants generated from project-related construction activities. Buildout of the future development associated with the Housing Element would occur over an approximately nine-year time frame (i.e., 2021-209 Housing Element). Construction time frames and equipment of individual site-specific project are not available and there is a potential for significant construction-related emissions. Therefore, despite adherence to AQ-1: GP EIR MM 2-1, impacts from construction would remain significant.

Operational impacts would be less than significant.

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IV. ENVIRONMENTAL IMPACT ANALYSIS
C. BIOLOGICAL RESOURCES

1. INTRODUCTION

This section of the EIR analyzes the potential environmental effects on biological resources from implementation of the proposed project.

A. 2015 General Plan EIR Analysis and Conclusions

The 2015 General Plan EIR determined that implementation of the 2015 General Plan Update would not impact sensitive species occurring in certain areas of the City. One of the key visions and guiding principles of the 2015 General Plan Update is to protect and be responsible stewards of the neighboring San Gabriel Mountain foothill's wildlife, forest, open space, watershed, and all other natural resources and the 2015 General Plan Update and Implementation Program contain policies and implementation measures designed to minimize impacts on sensitive species. Therefore, the 2015 General Plan EIR would not create a significant impact to sensitive species.

The 2015 General Plan EIR determined that implementation of the 2015 General Plan Update would not cause the loss of sensitive natural communities in certain areas of the City. As with sensitive species, the 2015 General Plan Update and Implementation Program contain policies and implementation measures designed to minimize impacts on sensitive natural communities and the 2015 General Plan EIR would not create a significant impact to sensitive natural communities.

The 2015 General Plan EIR determined that implementation of the 2015 General Plan Update would not have a substantial adverse effect on federally protected wetlands in certain areas of the City. Most natural waterways in the City are in the foothill area that would be designated Natural Open Space and would not be designated for development and any future development that would disturb or impact waters, wetlands, and/or riparian habitats would be required to prepare site-specific environmental documentation in accordance with CEQA and the requirements of applicable regulatory agencies (e.g., California Department of Fish and Wildlife, United States Fish and Wildlife Services, and Army Corps). As with sensitive species and natural communities, the 2015 General Plan Update contains policies designed to minimize impacts on wetlands. Therefore, the 2015 General Plan EIR found no impacts to impacts to wetlands.

The 2015 General Plan EIR determined that implementation of the 2015 General Plan Update would not create a significant impact on wildlife movement corridors. Furthermore, as with sensitive species, natural communities, and wetlands, the 2015 General Plan Update and Implementation Program contain policies and implementation measures designed to minimize impacts on wildlife movement corridors. Therefore, future development that would be accommodated by the 2015 General Plan Update, any land use changes proposed under the 2015 General Plan Update, and any new or updated policies of the 2015 General Plan Update were found by the 2015 General Plan EIR to not create a significant impact to wildlife movement corridors. In addition, future development that would be accommodated by the 2015 General Plan Update and would involve the removal of trees and other vegetation would be required to comply with the Migratory Bird Treaty Act (MBTA) to ensure that impacts do not occur.

The 2015 General Plan EIR determined that implementation of the 2015 General Plan Update would not result in a conflict with Sierra Madre's tree preservation ordinance. Future development and/or redevelopment activities under the 2015 General Plan Update would be required to comply with Chapter

12.20 (Tree Preservation) of the City's Municipal Code and, if occurring in the Hillside Management Zone, Section 17.52.180 (Biotic Resources Management Plan). Furthermore, as with sensitive species, natural communities, wetlands, and wildlife movement corridors, the 2015 General Plan Update and Implementation Program contain policies and implementation measures designed to minimize impacts on trees and the City's tree preservation ordinance. Therefore, future development that would be accommodated by the 2015 General Plan Update, any land use changes proposed under the 2015 General Plan Update, and any new or updated policies of the 2015 General Plan Update were found by the 2015 General Plan EIR to not create a significant impact to trees and the City's tree preservation ordinance.

The 2015 General Plan EIR determined that implementation of the 2015 General Plan Update would not conflict with an adopted conservation plan protecting biological resources because the City is not in the plan area of any habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan. Therefore, no conflicts would occur.

2. ENVIRONMENTAL SETTING

A. Existing Conditions

1) *Existing Conservation Plans and Areas*

City of Sierra Madre Open Space

Over 600 acres in the northern part of the City is designated Hillside (610 acres) and Natural Open Space (544 acres) in the current Sierra Madre General Plan. These areas are in the southern foothills of the San Gabriel Mountains; they consist of steep slopes and canyons and are contiguous with the Angeles National Forest on the north.

Angeles National Forest

The Angeles National Forest, which spans approximately 700,000 acres, extends from the western edge of San Bernardino County in the eastern San Gabriel Mountains in the east to the eastern edge of Ventura County in the northern Transverse Ranges in the west. The Angeles National Forest provides habitat for more than 180 species identified as sensitive, of concern, or at risk.

Critical Habitat

There is an area of critical habitat for Braunton's milk-vetch (*astragalus brauntonii*) approximately 0.75-mile east of the City boundary, spanning approximately 285 acres.

Altadena Foothills and Arroyos Significant Ecological Area

The Altadena Significant Ecological Area (SEA) almost reaches the City's northwestern corner, and extends northwest through the foothills of the San Gabriel Mountains eight miles to the City of La Cañada Flintridge. SEAs are ecologically important land and water areas that are valuable as plant and/or animal communities. SEAs are not preserves; however, development projects proposed in SEAs are subject to increased environmental and design review with the aim of balancing development with ecological resources.

2) *Plant Communities/Habitat*

The hillside portions of the San Gabriel Mountains within the City's northern boundary consist of south-draining canyons, swales, mountainous terrain, ridgelines, knolls, foothills, rock outcroppings, wildlife

habitat, and a wide range of native and non-native vegetation. The City has established a Hillside Management Zone (HMZ) in its Municipal Code, which affects approximately 610 acres of the City's hillsides. The Stated purpose of the HMZ is to "protect the natural environment of the hillside areas from change by preserving and protecting the views to and from the hillside areas in the City to maintain the identity, image, and environmental quality of the City."

Vegetation Types

The HMZ, largely open space, comprises approximately 37 percent of the City's land area. Vegetation types within the HMZ include grassland, coastal sage scrub, chaparral, southern oak woodland, and riparian forest/woodland, which are described below.

Annual Grassland is characterized by a variety of annual grass species, including red brome (*Bromus madriensis*); slender wild oak (*Avena barbata*); foxtail fescue (*Vulpia myuros*); ripgut brome (*Bromus diandrus*); Bermuda grass (*Cynodon dactylon*); schismus (*Schismus barbatus*): and foxtail barley (*Hordeum murinum*). Other common plants include red-stemmed filaree (*Erodium cicutarium*); bur clover (*Medicago polymorpha*); summer mustard (*Hirschfeldia incana*); tocalote (*Centaurea melitensis*): white-stemmed filaree (*Erodium moschatum*); common sow thistle (*Sonchus oleraceus*); miniature lupine (*Lupinus bicolor*); and cheeseweed (*Malva perviflora*).

Coastal Sage Scrub is characterized by small aromatic drought-deciduous shrubs; that is, shrubs that either drop their leaves or grow small secondary leaves during the long dry season. Coastal sage scrub occurs on slopes of mountains and hills in coastal southern California, mostly below 3,000 feet. Common plant species in coastal sage scrub include California sagebrush (*Artemis californica*); flat-topped buckwheat (*Eriogonum fasciculatum*); black sage (*Salvia mellifera*); chaparral yucca (*Yucca whipplei*); saw-tooth goldenbush (*Hazardia squarrosa*); chaparral bedstraw (*Galium angustifolium*); laurel sumac (*Malosma laurina*); white sage (*Salvia apiana*); deerweed (*Lotus scoparius*); California bush sunflower (*Encelia californica*); and sand wash butterweed (*Senecio flaccidus*).

Chaparral consist of dense thickets of woody shrubs from four to eight feet or higher, and dominates much of the foothills of mountains in coastal southern California. Common plants in chaparral in the region include chamise (*Adenostoma fasciculatum*); black sage (*Salvia mellifers*); thick-leaved lilac (*Ceanothus crassifolius*); sugar bush (*Rhus ovata*); California sagebrush, laurel sumac, mountain mahogany (*Cercocarpus betuloides*); Mexican elderberry (*Sambucus Mexicana*); laurel sumac (*Malosma laurina*); coast live oak (*Quercus agrifolia*); holly-leaved redberry (*Rhamnus ilicifolia*); toyon (*Hetermeles arbutifolia*); poison oak (*Toxicodendron diversilobum*); chaparral honeysuckle (*Lonicera subspicata*); and bush lantanta (*Lantana camara*).

Southern Oak Woodland consists of woody vegetation generally over 15 feet tall and typically occupies north-facing slopes, shaded canyon ravines and sheltered interior valleys below approximately 5,000 feet. Dominant tree species include coast live oak (*Quercus agrifolia*); valley oak (*Quercus lobate*); Engelmann oak (*Quercus engelmannii*); California sycamore (*Platanus racemose*); and California black walnut (*Juglans californica*). Other species in southern oak woodland include Mexican elderberry, and toyon, poison oak, and heart-leaved penstemon (*Keckiella cordifolia*); California pellitory (*Parietaria floridana*); smilo grass (*Piptatherum miliaceum*); lantana, common eucrypta (*Eucrypta chrysanthemifolia*); Douglas' nightshade (*Solanum douglasii*); and coastal wood fern (*Dryopteris arguta*).

Riparian habitats are those along banks of rivers or stream. Riparian forest habitat is mapped within the HMZ on the National Wetlands Mapper in several locations, including Bailey Canyon and Little Santa Anita Canyon; riparian scrub/shrub vegetation is also mapped in a few scattered areas in the HMZ. Two riparian

vegetation types known in the region, Southern Coast Live Oak Riparian Forest and Southern Sycamore Alder Riparian Woodland, are described below under the *Sensitive Resources* discussion.

Wetlands are land that is flooded or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that normally does support, a prevalence of vegetation adapted to life in saturated soils. Wetlands include areas such as swamps, marshes, and bogs. There are many ephemeral streams in canyons and gullies, as well as several intermittent blue-line streams, in the HMZ. Many of the streams and drainages, as well as debris basins, are mapped as Wetlands on the National Wetlands Mapper.

Ornamental trees and shrubs occur throughout the city, and contain a mix of introduced species and native plant species. Development in parts of the city occurred in and around the existing oak trees, and these urban forests still provide habitat for birds and other tree-dwelling animals such as squirrels.

Sensitive Plant Communities

Sensitive plant communities are those that are considered rare in the region by regulatory agencies, which are known to provide habitat for sensitive animal or plant species, or are known to be important wildlife corridors.

There are three sensitive plant communities documented in the city on the California Natural Diversity Database, as described below.

Southern Coast Live Oak Riparian Forest consists of open to locally dense riparian woodlands dominated by coast live oak (*Quercus agrifolia*); and occurs in bottomlands and outer floodplains, in canyons and valleys of coastal southern California.

Riversidian Alluvial Fan Sage Scrub is an open to moderately dense, broadleaved evergreen scrub. Typical plants of this vegetation type include scalebroom (*Lepidospartum squamatum*); white sage (*Salvia apiana*); redberry (*Rhamnus crocea*); flat-top buckwheat (*Eriogonum fasciculatum*); our lord's candle (*Yucca whipplei*); California croton (*Croton californicus*); cholla (*Opuntia* spp.); tarragon (*Artemisia dracunculus*); yerba santa (*Eriodictyon* spp.); mule fat (*Baccharis salicifolia*); and mountain-mahogany (*Cercocarpus betuloides*). This vegetation type is mostly restricted to floodplain habitats that flood once or twice per decade, and depends on occasional flooding and resulting sediment reworking.

Coastal sage scrub is described in the preceding section.

Two additional sensitive plant communities are documented as occurring near the city boundaries on the CNDDB; therefore, there is some possibility that these communities also occur in the city.

Southern Sycamore Alder Riparian Woodland is a tall, open, broadleafed, winter-deciduous streamside woodland dominated by California sycamore (*Platanus racemosa*), and often also by white alder (*Alnus rhombifolia*). It occurs in rocky streambeds, subject to flooding, in mountains of southwestern California and northern Baja California.

Open Engelmann Oak Woodland is an evergreen woodland dominated by Engelmann oak (*Quercus engelmannii*) that occurs on relatively moist sites on gentle slopes and valley bottoms, mostly in San Diego and Riverside counties. There are remnants of this woodland in several parts of the City that were earlier developed with residential land uses.

3) *Natural Habitat and Wildlife Species*

There are no large areas of natural habitat in the city outside of the foothill areas designated as Hillside and Natural Open Space on the current land use map of the City's General Plan, as described above. Bailey Canyon Wilderness Park in the northwestern part of the City is approximately 2.7 acres in area, is partly developed with a parking lot, and is separated from natural habitat to the north by a debris basin abutting the north side of the park.

Most of the wildlife species that occur in the hillside areas of the city were once common but are now increasingly rare to the San Gabriel Mountains and the urban interface. The types of wildlife species include a wide variety of mammals, birds, amphibians, and reptiles. Many of these species are present in the scrub and riparian habitats and frequently use the urban interface for foraging.

4) *Sensitive Resources*

Special status species include those listed as endangered or threatened under the federal Endangered Species Act or California Endangered Species Act; species otherwise given certain designations by the California Department of Fish and Wildlife; and plant species listed as rare by the California Native Plant Society. Following is discussion of sensitive and special status species within the city.

Sensitive Plant and Animal Species

Special status species with occurrences in the city documented in the CNDDB are listed in **Table V.C-1 Special Status Plant Species Known from the Project Region**, and **Table V.C-2, Special Status Animal Species from the Project Region**. Also listed in the tables are special status species with documented occurrences immediately north of the city in the Angeles National Forest, or within approximately two miles east or west of the City in open space at the foot of the San Gabriel Mountains at similar elevations and with similar habitat types to those occurring in the City, as there is some potential that those species could occur in the city.[1]

5) *Wildlife Movement Corridors*

A wildlife movement corridor is a linear habitat that connects two or more significant wildlife habitat areas. Wildlife corridors allow wide-ranging animals to travel so that populations can move in response to environmental changes and natural disasters, threatened species can be replenished from other areas, and genetic interchange can occur.

The city consists of an urbanized area at lower elevations and the foothills of the San Gabriel Mountains along the northern boundary of the city. Wildlife movement in the city would be greatest in the foothills, where species such as mule deer, bobcat, and coyote would generally move along ridgelines, drainage bottoms, and unpaved roads. Two important aspects of this movement would be east-west movement that connects habitats along the San Gabriel Mountains on either side of Sierra Madre, and north-to-south movement that brings animals to lower elevations, leading potentially to mortality (e.g., roadkills) and conflicts with people.

[1] *The area searched on the CNDDB is the Mount Wilson Quadrangle, which covers the area described above.*

6) *Jurisdictional Waters and Wetlands*

Riparian habitats and wetlands in the city are described above under the *Plant Communities/Habitat* discussion. One major waterway, Sierra Madre Wash, passes north to south through the developed part of the city, exiting along the eastern City boundary near the intersection of Grandview Avenue and Oak View Lane. The Sierra Madre Wash consists of concrete bed and banks. Engineered waterways in California are jurisdictional to the California Department of Fish and Wildlife, the Corps, and the affected Regional Water Quality Control Board.

Table IV. C-1
Special Status Plant Species Known from the Project Region

Species	Status		Habitat Preference
	Federal/ State	CNPS/Local	
Astragalus brauntonii Braunton's milkvetch	FE	CNPS 1B.1	Found in openings of coastal sage scrub and chaparral, or in grasslands, often on carbonate soils. Recorded from hills above Monrovia, south Clamshell Canyon.
Berberis nevinii Nevin's barberry	FE SE	CNPS 1B.1	Found in alluvial fan sage scrub, coastal sage scrub and chaparral habitats in sandy, gravelly areas. Known to occur in San Francisquito Canyon, was historically recorded for Big Tujunga Canyon and occurs in a canyon above Claremont.
Brickellia nevinii Nevin's brickellbush	—	LC	Found on xeric rock faces in coastal sage scrub or chaparral. Known to occur in upper Little Tujunga Canyon and other localities in the West end of the San Gabriel Mountains.
Brodiaea filifolia Thread-leaved brodiaea	FE SE	CNPS 1B.1	Moist grasslands and the periphery of vernal pools, playas, cismontane woodland, valley and foothill grasslands, and coastal scrub on clay or alkaline, silty-clay soils. Found in annual or perennial grasslands. Recorded from Glendora.
Calochortus catalinae Catalina mariposa lily	—	CNPS 4.2	Perennial & annual grasslands and coastal sage scrub in lower elevational areas of the San Gabriel Mountains
Calochortus clavatus var. gracilis slender mariposa lilyp	—	CNPS 2.2	Found in openings of coastal sage scrub and chaparral. Recorded from San Francisquito, Evey, and Mint Canyons.
Calochortus plummerae Plummer's mariposa lily	—	CNPS 1B.2	Found in coastal sage scrub or chaparral on granitic or alluvial soils, including alluvial fan areas. Recorded from Monrovia, Arroyo Seco, San Gabriel River, Little Tujunga Canyon, and Pacoima Wash.
Chorizanthe parryi var. fernandina San Fernando Valley spineflower	FC SE		Openings in coastal sage scrub and grasslands; often sandy. Historically recorded from the Tujunga Wash. Occurs on open terraces, or in alluvial fans. Currently only two localities are known: Laskey Mesa, and the Newhall Ranch.
Chorizanthe parryi var. parryi Parry's spineflower	—	CNPS 1B.1	Found in openings of coastal sage scrub or chaparral, including alluvial fan areas. Recorded from Mt. Lowe, Upland, Claremont, San Gabriel wash, Lytle Creek, and Texas Canyon.

Table IV. C-1
Special Status Plant Species Known from the Project Region

Species	Status		Habitat Preference
	Federal/ State	CNPS/Local	
Dodecahema leptoceras Slender-horned spineflower	FE SE	CNPS 1B.1	Chaparral, coastal scrub, alluvial fan sage scrub, often on alluvial terraces. Known to occur in the Tujunga Wash. Historically known from the Rubio Wash, Santa Anita Canyon.
Galium grande San Gabriel bedstraw	—	CNPS 1B.2	Found in chaparral, oak woodland, coniferous forest. Recorded from Little Santa Anita Canyon, Sawpit Canyon, Chantry flat, and Mt. Wilson.
Horkelia cuneata sp. puberula Mesa horkelia	—	CNPS 1B.1	Chaparral and coastal sage scrub.
Juglans californica var. californica Southern California walnut	—	CNPS 4.2	Occurs in grasslands, floodplains, oak woodland and sage scrub/chaparral habitats. Known to occur in the lower elevations of the west end of the San Gabriel Mountains and associated floodplains.
Lepechinia fragrans Fragrant pitcher sage	—	CNPS 4	Found in chaparral from the San Gabriel to the Santa Monica Mountains. Recorded from Maple Canyon (Tujunga Canyon Drainage), and many other localities in the San Gabriel Canyon.
Lilium humboldtii ssp. ocellatum Ocellated Humboldt lily	S	CNPS 4	Found in shaded canyons in oak and riparian woodlands Recorded for drainages in the west end of the San Gabriel Mountains.
Linanthus concinnus San Gabriel linanthus	S	CNPS 1B	Found in lower montane coniferous forest. Recorded from Mount Markham, Mt. Lowe.
Linanthus orcuttii Orcutt's linanthus	—	CNPS 1B	Found in gravelly openings in chaparral. Historically recorded from Pasadena.
Malacothamnus davidsonii Davidson's bush mallow	—	CNPS 1B.2	Occurs in coastal sage scrub, chaparral and riparian habitats. Known to occur in the Verdugo Hills, and Little Tujunga Canyon.
Quercus durata ssp. gabrielensis San Gabriel Mountains Leather oak	—	CNPS 4	Occurs in chaparral on the south slope of the San Gabriel Mountains. Known localities include Pacoima Canyon, Eton Canyon, Mt. Lowe trail, Stoddard Canyon and Evey Canyon.
Quercus engelmannii Engelmann's Oak	—	CNPS 4	Found in savannas, and oak woodlands. In the San Gabriel Mountain. This species has been recorded from Claremont and Pasadena.
Quercus durata ssp. gabrielensis X Q. engelmannii San Gabriel oak	—	LC	Found in mesic canyons in chaparral. Recorded from Monrovia, Glendora, and Sierra Madre.
Thelypteris puberula var. sonoriensis Sonoran maiden fern	—	CNPS 2	Found along streams and seeps. Recorded from Santa Anita Canyon, Monrovia Canyon and Roberts Canyon.

Notes:

Federal Classifications
FE - Listed by the Federal government as an endangered species.
FT - Listed by the Federal government as a threatened species.
S - Forest Service Sensitive Plant Species

State Classifications
CE - Listed as endangered by the State of California
CT - Listed by the State of California as a threatened species
SP - Listed as a Special Plant by the CNDDB (2007)

California Native Plant Society (CNPS)
CNPS 1A - Plants presumed extinct in California.
CNPS 1B - Plants considered rare, threatened, or endangered in California and elsewhere.
CNPS 2 - Plants rare, threatened, or endangered in California but more common elsewhere.
CNPS 3 - Plants about which we need more information: A review list.
CNPS 4 - Plants of limited distribution - A watch list.

CNPS Threat Extensions

Table IV. C-1
Special Status Plant Species Known from the Project Region

Species	Status		Habitat Preference
	Federal/ State	CNPS/Local	
Other LC - Local concern		0.1 - Seriously endangered in California 0.2 - Fairly endangered in California 0.3 - Not very endangered in California	

Table IV. C-2
Special Status Animal Species from the Project Region

Species Name	Status	Habitat Preference
Insects		
San Gabriel Mountains Elfin butterfly *Incisalia mossii hidakupa*	SA	Found on steep slopes w/ *Sedum*. Reported from Tujunga Canyon, Stoddard Canyon, and San Antonio wash.
Human folly blue *Philotes sonorensis extinctis*	LC	Found on steep slopes associated with *Dudleya*. Found in Azusa Canyon, currently considered extinct.
San Gabriel Mountains blue butterfly *Plebejus saepiolus aureolus*	SA	Found in wet meadows. Reported from Big Pines.
Amphibians and Reptiles		
Western spadefoot *Spea hammondii*	CSC	Open areas with sandy or gravelly soils, in a variety of habitats including grasslands, chaparral, and sandy washes. Shallow pools in these habitats are necessary for reproduction. Breeds in ponds, streams, and rain pools that do not contain bullfrogs and fish, which prey on tadpoles. Historically recorded from Sierra Madre.
Coast range newt (California newt) *Taricha torosa*	CSC	Found in pools & ponds of perennial streams. Recorded from Little Santa Anita Canyon, (Big) Santa Anita Canyon, Eaton Canyon.
California red-legged frog *Rana draytoni*	ST, CSC	Dense, shrubby riparian vegetation associated with deep, still or slow-moving water.
Sierra Madre yellow-legged frog *Rana mucosa*	FE, CSC	Found in permanent, fast running streams. Historically recorded from Little Santa Anita Canyon, (Big) Santa Anita Canyon, Eaton Canyon.
Anniella pulchra Silvery legless lizard	CSC	Moist loose soils and leaf litter in diverse plant communities, including chaparral, pine-oak and riparian woodlands, desert scrub, and sandy washes.
San Diego horned lizard *Phrynosoma coronatum blainvillei*	CSC	Occurs in variety of habitats including coastal sage, grassland, chaparral, oak woodland, and riparian woodland with loose sandy soils and abundant native ants or other insects.
Southwestern pond turtle *Actinemys marmorata*	CSC	Slow-water aquatic habitats with available basking sites (e.g., submerged logs, open mud banks).
San Bernardino ringneck snake *Diadophis punctatus modestus*	S	Moist habitats, including wet meadows, rocky hillsides, gardens, farmland, grassland, chaparral, mixed coniferous forests, woodlands. Recorded from Sierra Madre, Santa Anita Canyon.
Coastal Rosy Boa *Lichanura trivergata roseofusca* *Charina*?	S	Rocky areas in coastal sage scrub and chaparral. Recorded from Eaton Canyon, Sierra Madre, Mt. Wilson.
Coast patch-nosed snake *Salvadora hexalepis virgultea*	CSC	Semi-arid brushy areas and chaparral in canyons, rocky hillsides, and plains. Recorded from Sierra Madre, Santa Anita Canyon.

Table IV. C-2
Special Status Animal Species from the Project Region

Species Name	Status	Habitat Preference
Birds		
Black swift *Cypseloides niger* (nesting)	CSC	Mountain foothill Canyons. Known to nest in Santa Anita Canyon.
California spotted owl *Strix occidentalis*	CSC	Montane hardwood-conifer forests, and oak woodland and valley foothill riparian at lower elevations.
Willow flycatcher *Empidonax traillii*	CE	Riparian woodland and scrub habitats.
Loggerhead shrike *Lanius ludovicianus*	CSC (nesting)	Occurs in grassland, open sage scrub, chaparral, and desert scrub. Species apparently has declined dramatically in coastal southern California in recent years.
Coastal cactus wren *Campylorhynchus brunneicapillus cousei*	CSC	Occurs in coastal sage scrub and chaparral plant communities with substantial cacti (*Opuntia* sp.) stands. Recorded from the S. end of Christy Ave, near the eastern edge of Hansen Dam Park.
Coastal California gnatcatcher *Polioptila californica*	FT CSC	Occurs primarily in coastal sage scrub habitat, but also use chaparral, grassland, and riparian habitats where they occur in proximity to sage scrub. Although historically found (Monrovia) within sage scrub in the region of the project, this species has not been observed in the central portion of the lower San Gabriel Mountains in recent years
Yellow-breasted chat *Icteria virens*	CSC	Occurs in dense riparian woodlands, willows thickets, and dense brush along flowing streams.
Mammals		
San Diego black-tailed jackrabbit *Lepus californicus bennetti*	CSC	Occurs in a variety of habitats, including sage scrubs, chaparral, agricultural lands and other disturbed habitats, but prefers open grassland.
Pallid bat *Antrozous pallidus*	CSC	Occurs in a variety of habitats, including woodlands, scrub, rocky canyons, farm land, and desert. Roosts in rock crevices, old buildings, bridges, caves, mines, and tree cavities. In the region this species is generally associated with sycamore and oak woodlands.
Western mastiff bat *Eumops perotis californicus*	CSC	Variety of habitats, from desert scrub and chaparral to oak woodland and ponderosa pine, but only where there are significant rock features for roosting. Natural roosts are often found under large exfoliating slabs of granite, sandstone slabs, or in columnar basalt, on cliff faces, or in large boulders. Some roosts have been found in buildings.
Hoary bat *Lasiurus cinereus*	CSC	Occurs in variety of habitats, from lower elevation mixed coniferous/hardwood forest to higher elevation conifers. Known also from orchards. Migratory, spending winters in the northern part of state and summers along the coast. Solitary species that roosts primarily in coniferous and deciduous trees.
Los Angeles pocket mouse *Perognathus longimembris brevinasus*	CSC	Inhabits coastal sage scrub and alluvial fan sage scrub habitats.
San Diego desert woodrat *Neotoma bryanti intermedia*	CSC	Occurs in scrub and desert habitats, usually in association with rock outcroppings, boulders, cacti, or areas of dense undergrowth.

Notes:
Federal
FE - Federally Endangered
FT - Federally Threatened

State
SE - State Endangered
ST - State Threatened

Califorina Department of Fish and Game (CDFW)
CSC - California Species of Concern
CFP - California Fully-Protected Species
SA - Special Animal

7) *Housing Element Project Sites*

Site 1

Site 1 includes nine parcels along Mariposa Avenue and Lima Street that are currently developed with single- and multi-family residential uses. Biological resources on the site include common residential landscaping and street trees. There are no sensitive habitats, riparian habit, wetlands, migration corridors, or areas included in adopted habit plans on the site.

Site 2

Site 2 includes ten parcels along Suffolk Avenue and Baldwin Avenue developed with older multi-family development. Biological resources on the site include common residential landscaping and street trees. There are no sensitive habitats, riparian habit, wetlands, migration corridors, or areas included in adopted habit plans on the site.

Site 3

Site 3 includes one parcel along Sierra Madre Boulevard that is currently developed with four older multi-family residential buildings, open space, and parking areas. Biological resources on the site include common residential landscaping and street trees. There are no sensitive habitats, riparian habit, wetlands, migration corridors, or areas included in adopted habit plans on the site.

Site 4

Site 4 includes one parcel along N. Baldwin Avenue that is currently developed with a single-family residence. Biological resources on the site include common residential landscaping and street trees. There are no sensitive habitats, riparian habit, wetlands, migration corridors, or areas included in adopted habit plans on the site.

Site A

Site A is located on the parking area of St. Rita Catholic Church. The site is completely paved with several trees located in tree wells. There are no sensitive habitats, riparian habit, wetlands, migration corridors, or areas included in adopted habit plans on the site.

Site B

Site B is located in the parking area of the United Methodist Church. The site is completely paved and there are no trees on the site. There are no sensitive habitats, riparian habit, wetlands, migration corridors, or areas included in adopted habit plans on the site.

Site C

Site C is located on the parking area of the Old North Church. The site is completely paved with several trees located in tree wells. There are no sensitive habitats, riparian habit, wetlands, migration corridors, or areas included in adopted habit plans on the site.

Site D

Site D is located on asphalt play areas and the parking area of the Bethany Church and School. With the exception of a small lawn area, the site is completely paved. There are several trees located in tree wells and in the grassy area growing on the site. There are no sensitive habitats, riparian habit, wetlands, migration corridors, or areas included in adopted habit plans on the site.

B. Regulatory Setting

1) *Federal*

Endangered Species Act

The Federal Endangered Species Act (FESA) of 1973, as amended, was promulgated to protect and conserve any species of plant or animal that is endangered or threatened with extinction and the habitats in which these species are found. "Take" of endangered species is prohibited under Section 9 of the FESA. "Take," as defined under the FESA, means to "harass, harm, pursue, hunt, wound, kill, trap, capture, collect, or attempt to engage in any such conduct." Section 7 of the FESA requires federal agencies to consult with the U.S. Fish and Wildlife Service (USFWS) on proposed federal actions, which may affect any endangered, threatened or proposed (for listing) species or critical habitat that may support the species. Section 4(a) of the FESA requires that critical habitat be designated by the USFWS "to the maximum extent prudent and determinable, at the time a species is determined to be endangered or threatened." Critical habitat is formally designated by USFWS to provide guidance for planners/managers and biologists with an indication of where suitable habitat may occur and where high priority of preservation for a particular species should be given. Critical habitat includes areas occupied by the target species, and unoccupied areas. For activities conducted or funded by federal agencies, or requiring a federal permit, federal agencies must ensure that the action will not likely jeopardize the survival of the species, or destroy or adversely modify critical habitat. If the action would likely jeopardize a species, or adversely modify critical habitat, the agency must consult with either the Fish and Wildlife Service (FWS) or National Marine Fisheries Service (CRS 2005). Section 10 of the FESA provides the regulatory mechanism that allows the incidental take of a listed species by private interests and non-federal government agencies during lawful activities. Habitat conservation plans (HCPs) for the impacted species must be developed in support of incidental take permits for nonfederal projects to minimize impacts to the species and develop viable mitigation measures to offset the unavoidable impacts.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act of 1918 (MBTA), is the domestic law that affirms, or implements, the United States' commitment to four international conventions with Canada, Japan, Mexico, and Russia for the protection of shared migratory bird resources. The MBTA governs the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests. It prohibits the take, possession, import, export, transport, sale, purchase, barter, or offering of these activities, except under a valid permit or as permitted in the implementing regulations. USFWS administers permits to take migratory birds in accordance with the regulations promulgated by the MBTA.

Clean Water Act, Section 404

The United States Army Corps of Engineers (USACE) regulates discharges of dredged or fill material into "waters of the U.S."[2] (Including wetlands and non-wetland bodies of water that meet specific criteria) pursuant to Section 404 of the federal Clean Water Act (CWA), a permit is required for any filling or dredging within waters of the U.S. The permit review process entails an assessment of potential adverse impacts to USACE wetlands and jurisdictional waters, wherein the USACE may require mitigation measures. Where a federally listed species may be affected, a Section 7 consultation with USFWS may be required. If there is potential for cultural resources to be present, Section 106 review may be required. Also, where a Section 404 permit is required, a Section 401 Water Quality Certification would also be required from the Regional Water Quality Control Board (RWQCB).

Clean Water Act, Section 401 and 402

Section 401(a)(1) of the CWA specifies that any applicant for a federal license or permit to conduct any activity that may result in any discharge into navigable waters shall provide the federal permitting agency a certification, issued by the State in which the discharge originates, that any such discharge will comply with the applicable provisions of the CWA. In California, the applicable RWQCB must certify that the project will comply with water quality standards. Permits requiring Section 401 certification include USACE Section 404 permits and National Pollutant Discharge Elimination System (NPDES) permits issued by the Environmental Protection Agency (EPA) under Section 402 of the CWA. NPDES permits are issued by the applicable RWQCB. The City of Sierra Madre is within the jurisdiction of the Los Angeles RWQCB (Region 4).

2) *State*

California Fish and Game Code, Section 1600

Section 1600 of the California Fish and Game Code requires that a project proponent notify the California Department of Fish and Wildlife (CDFW) of any proposed alteration of streambeds, rivers, and lakes. The intent is to protect habitats that are important to fish and wildlife. CDFW may review a project and place conditions on the project as part of a Streambed Alteration Agreement (SAA). The conditions are intended to address potentially significant adverse impacts within CDFW's jurisdictional limits.

California Endangered Species Act

The California Endangered Species Act (CESA) generally parallels the main provisions of the FESA and is administered by CDFW. Its intent is to prohibit take and protect state-listed endangered and threatened species of fish, wildlife, and plants. Unlike its federal counterpart, CESA also applies the take prohibitions to species petitioned for listing (state candidates). Candidate species may be afforded temporary protection as though they were already listed as threatened or endangered at the discretion of the Fish and Game Commission. Unlike the FESA, CESA does not include listing provisions for invertebrate species. Under certain conditions, CESA has provisions for take through a 2081 permit or Memorandum of Understanding (MOU). In addition, some sensitive mammals and birds are protected by the State as Fully

[2] *"Waters of the United States," as it applies to the jurisdictional limits of the authority of the Corps of Engineers under the Clean Water Act, includes: all waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; all interstate waters including interstate wetlands; all other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce; water impoundments; tributaries of waters; territorial seas; wetlands adjacent to waters. The terminology used by Section 404 of the Clean Water Act includes "navigable waters", which is defined in Section 502(7) of the Act as "waters of the United States including the territorial seas."*

Protected Species. 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 CDFW's California Natural Diversity Data Base (CNDDB) project, which maintains a database of known and recorded occurrences of sensitive species. Informally listed taxa are not protected per se, but warrant consideration in the preparation of biological resources assessments.

3) *Local*

City of Sierra Madre Municipal Code

The City's Municipal Code contains existing standards and regulations that help mitigate potential impacts on biological resources. The following is a description of the provisions of the City's Municipal Code that are applicable to the General Plan Update.

- **Chapter 12.20 (Tree Preservation).** This chapter of the City's Municipal Code protects the following categories of trees:
  - Trees on City property.
  - Protected trees (Southern California Black Walnut [*Juglans californica*], Engelmann Oak [*Quercus engelmannii*], Coast Live Oak [*Quercus agrifolia*], or Western Sycamore [*Platanus racemosa*] tree whose trunk [or collective trunks] exceed a diameter of four inches measured four feet above natural ground level):
    - in connection with an application for a subdivision, a parcel map, development project, or proposed development project, to construct any pad, parking lot, grading, or other construction exempt from the city's environmental regulations; or
    - on undeveloped property.
- **Chapter 17.52 (Hillside Management Zone).** Section 17.52.180 (Biotic Resources Management Plan) of this chapter requires the preparation of a Biotic Resources Management Plan for an Application for Land Division in the Hillside Management zone. A Biotic Resources Management Plan is required to contain an assessment of existing flora and fauna on and near the site; an assessment of project impacts to biological resources; mitigation measures including no net loss of wetlands and other sensitive habitats; and identify regulatory permits needed for project approval.

City of Sierra Madre 2015 General Plan

The following are relevant policies and implementation measures of the Sierra Madre General Plan and Implementation Program.

General Plan Policies

Land Use Element

- Policy L15.2: Ensure that development in the hillside areas be located in those areas resulting in the least environmental impact.
- Policy L15.3: Require that all access into hillside areas be designed for minimum disturbance to the natural features.

- Policy L15.5: Consider the impact of development on wildlife.
- Policy L16.1: Minimize the amount of grading and removal of natural vegetation.
- Policy L17.1: Require the use of natural materials where allowed and earth tone colors for all structures to blend in with the natural landscape and natural chaparral vegetative growth.
- Policy L24.5: Encourage the retention of existing mature, specimen trees.
- Policy L43.2: Encourage the use of open space areas for the purposes of educating individuals and groups about the local environment. This may include informational gatherings, information kiosks, and other methods of public outreach.
- Policy L44.1: Support the purchase of hillside property by the Sierra Madre Mountains Conservancy and similar organizations.
- Policy L44.2: Require stringent environmental analysis following existing conservation easements prior to the installation of any improvements for any purpose on existing unimproved hillside land, in order to preserve existing biology, natural habitat, resources and watershed health.
- Policy L44.3: Establish the role of natural open space as an interface to the wilderness area.

Resource Management Element

- Policy R1.1: Maintain and enforce the Hillside Management Zone Ordinance and other ordinances that seek to protect hillside areas.
- Policy R1.2: Work with other hillside communities in the San Gabriel Valley to establish a protected hillside corridor along the entire length of the San Gabriel Mountains.
- Policy R2.1: Assist the Sierra Madre Mountains Conservancy and other non-profit organizations in the application of funds to purchase hillside property, and when feasible, to provide public access to the mountains via parks and trails.
- Policy R2.2: Designate properties purchased by the Conservancy and other non-profit organizations as natural open space utilizing conservation easements.
- Policy R2.3: Explore the use of bond issues, assessment districts, environmental partnerships and other methods for purchasing and managing hillside areas.
- Policy R2.4: Coordinate with other public agencies' plans and pursue partnerships with local and regional environmental and conservation organizations to locate and protect hillside open space areas.
- Policy R3.2: Ensure that wildland open space, including the areas of the city designated as High Fire Hazard Severity Zone, is left in its natural state with the exception of brush abatement for public safety in order to aid the City in fighting fires.
- Policy R3.3: Ensure that natural open space within the High Fire Hazard Severity Zones remains undeveloped so as to mitigate the flood cycles that follow wild land fires in the natural open space.

- Policy R3.4: Ensure the protection of natural open space so as to maintain it as a preventative measure against flooding, and as a means of capturing stormwater runoff for groundwater recharge.
- Policy R4.1: Raise awareness of Sierra Madre as an urban/wildlife interface where, as such, it is necessary for the residents to respect the wildlife, share space with wildlife, and to acknowledge the right of wildlife to pass within City limits undisturbed.
- Policy R4.2: Encourage grassroots community efforts dedicated to the peaceful co-existence with wildlife.
- Policy R4.3: Publicize and post signs that announce Resolution 72-62 which designates Sierra Madre as a Wildlife Sanctuary.
- Policy R4.4: Encourage wide availability and dissemination of materials teaching how to coexist with wildlife.
- Policy R4.5: Encourage the education of the public on how to "wild proof," and on compliance with State laws prohibiting trapping, killing, or relocating wildlife.
- Policy R5.2: Actively enforce regulations prohibiting spiked iron fencing.
- Policy R5.2: Encourage residents to modify any existing structures to better accommodate safe passage of wildlife.
- Policy R5.3: Continue to include wildlife-resistant garbage containers for the High Activity Wildlife Zone in the waste disposal contract.
- Policy R5.4: Create a High Activity Wildlife Zone that mirrors the Fire Hazard Severity Zone.
- Policy R10.1: Continue to develop public awareness and support for the City's tree ordinance.
- Policy R10.2: Continue to develop tree preservation and protection measures.
- Policy R10.3: Carry out the objectives and recommendations of the Community Forest Management Plan.
- Policy R10.4: Continue to develop and update a recommended tree palette for parks and parkways.
- Policy R10.5: Continue to update and maintain an inventory of trees located on City property including parkways, parks and other City-owned locations.
- Policy R10.6: Continue to publish and update basic tree maintenance and care brochures for residents.
- Policy R10.7: Continue to provide a tree expert as needed to assist the City regarding tree removal, tree trimming, root pruning, identifying tree diseases, and grading that might affect trees.
- Policy R10.8: Continue to monitor construction projects with regard to grading and construction effects on trees, tree removal and replacement.
- Policy R10.9: Continue to monitor latest trends and research in the field of arboriculture to better manage the City's urban forest.

- Policy R10.10: Promote the voluntary Legacy Tree Program.
- Policy R11.1: Locate financial assistance for trimming and care of trees.
- Policy R11.2: Solicit community participation in programs which are geared towards planting and maintaining City trees.

Implementation Program Measures

Land Use Implementation Program

- Measure IM-18: The City shall amend the RC (Residential Canyon) Zoning Ordinance to protect natural elements such as large rocks, plants and trees.
- Measure IM-27: The City shall continue to enforce the Hillside Management Zone Ordinance, and amend as necessary to address development density, environmental impact of development, access, water conservation and development impacts on wildlife.
- Measure IM-63: The City shall amend the O (Open Space) Zoning Ordinance as necessary to allow constructed open space, including the installation and maintenance of recreational equipment, and establish a program to educate individuals about the local environment.
- Measure IM-64: The City shall amend the Open Space Ordinance to include standards to address preservation of natural open space (i.e. conservation easements), stringent environmental review of property adjacent to conservation easements, and dedication of natural and constructed open space and/or payment of in-lieu fees.

Hillside Preservation Implementation Program

- Measure IM-1: The City shall continue to enforce the Hillside Zone Ordinance and other ordinances that seek to protect the hillside areas.
- Measure IM-2: The City shall approach other hillside communities in the San Gabriel Valley to discuss the feasibility of establishing a protected hillside corridor along the San Gabriel Mountains.
- Measure IM-3: The City shall work with the Sierra Madre Mountains Conservancy to help it obtain funds to purchase hillside property, including exploring the use of bond issues, assessment districts, environmental partnerships, and other methods for purchasing and managing hillside areas.
- Measure IM-5: The City shall amend the Open Space Ordinance to identify wildland open space as areas to remain in their natural state to mitigate flood cycles and capture stormwater runoff, except where brush abatement is necessary to for fire safety.
- Measure IM-6: The City shall designate properties purchased by the Sierra Madre Mountains Conservancy and other non-profit organizations as natural open space utilizing conservation easements.
- Measure IM-7: The City shall coordinate with other public agencies' plans and pursue partnerships with local and regional environmental and conservation organizations to locate and protect hillside open space areas.

Co-Existence with Wildlife Implementation Program

- Measure IM-1: The City shall provide brochures, and provide information on the City's website and e-blast to raise awareness that Sierra Madre is an urban/wildlife interface.
- Measure IM-2: The City shall promote the establishment of a non-Brown Act, grassroots committee dedicated to encouraging the peaceful co-existence with wildlife.
- Measure IM-3: The City shall publicize and post signs that announce Resolution 72-62 which designates Sierra Madre as a Wildlife Sanctuary.
- Measure IM-4: The City shall provide information to the public regarding "wild proofing" their property and State laws that prohibit trapping, killing and relocating wildlife.
- Measure IM-5: The City shall continue to enforce regulations prohibiting spiked iron fencing.
- Measure IM-6: The City shall consider providing incentives for property owners to modify existing structures to better accommodate safe passage of wildlife.
- Measure IM-7: The City shall continue to make adequate waste removal services available to existing and future residents and businesses through an ongoing exclusive contract with a professional waste removal company, including providing wildlife-resistant trash cans.
- Measure IM-8: The City shall disseminate information associated with the High Activity Wildlife Zone.

Tree Preservation Implementation Program

- Measure IM-1: The City shall continue to enforce the City's existing Tree Preservation Ordinance
- Measure IM-2: The City shall provide educational materials and opportunities regarding tree care and maintenance.
- Measure IM-3: The City shall implement the recommendations of the Community Forest Management Plan.
- Measure IM-4: The City shall follow developments in tree care and maintenance for inclusion into City operations and tree care educational programs.
- Measure IM-5: The City shall develop funding sources for the enhancement of the ongoing tree maintenance and planting program.

3. ENVIRONMENTAL IMPACTS AND MITIGATIONS

A. Threshold of Significance

Appendix G of the CEQA Guidelines provides thresholds address impacts to biological resources. Specifically, the Guidelines state that the proposed project may have an adverse significant biological resources impact if it would:

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 Game or U.S. Fish and Wildlife Service;

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;

c) Have a substantial adverse effect on state or federally protected wetlands (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 to with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;

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

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

B. Project Impacts and Mitigation Measures

Impact C-1: Would the project 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 Game or U.S. Fish and Wildlife Service?

Impact Analysis:

The 2015 General Plan EIR determined that the 2015 General Plan Update would not impact sensitive species occurring in certain areas of the City. The 2015 General Plan Update includes policies and implementation measures that would protect and minimize impacts on sensitive species to the neighboring San Gabriel Mountain foothill's wildlife, forest, open space, watershed, and all other natural resources in the City.

Sites 1-4 and A-D are all developed with urbanized uses and do not contain any sensitive habitat. Pallid bat (Antrozous pallidus) and western mastiff bat (Eumops perotis californicus) may have the potential to be present on these sites as these species are found in developed urbanized areas. Western mastiff bat is an uncommon resident in southeastern San Joaquin Valley and Coastal Ranges from Monterey County southward through southern California, from the coast eastward to the Colorado Desert. Suitable habitat includes tall buildings; the bat needs height to drop off to take flight. Buildings in the Sierra Madre are low-rise, and therefore this species is unlikely to use buildings in the City for roosting. As discussed in the 2015 General Plan EIR, although pallid bat could use buildings in Sierra Madre for night roosts, it would be very unlikely to use buildings occupied in the evenings, such as commercial uses open during the evening and residences, due to its sensitivity to disturbance of roosting sites. However, pallid bats may roost in trees on Sites A-D, which are not used for residential uses and therefore, not occupied throughout the night.

Potential development on Sites 1-4 and A-D resulting from the project could require tree or landscaping removal that could impact nesting birds or raptors. CDFW Code 3513 provides protection to the birds listed under the federal Migratory Bird Treaty Act (MBTA), essentially all native birds. Section 3503 of the CDFW Code makes it unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Trees and vegetation on Sites 1-4 and A-D may provide suitable habitat, including nesting habitat, for migratory

birds protected under the MBTA and under Section 3513 et seq of the CDFW Code. Therefore, removal of trees and vegetation to accommodate development on Sites 1-4 and A-D could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment.

The update to the Land Use Element includes establishing two new multi-family residential land use categories (R-3-20 and R-3-30), creating an Affordable Housing Overlay on select congregational sites, along with minor changes to the Land Use table and map to accommodate residential land uses on the sites identified to meet the RHNA allocation. The land use designation changes and rezoning would allow development on Sites 1-4 and A-D, which could result in impacts to pallid bats, nesting birds, and raptors.

The update to the Safety Element includes policies related to limiting risk from wildfire, including avoiding development in Very High Fire Severity Zones, updating maps related to fire hazards, and developing a Vegetation Management Program. While these policies would result in the removal of some vegetation, this removal would be limited to the City limits and in areas that are predominately developed with urbanized uses. Additionally, these polices would also limit new development in the canyon and foothill slope area and reduce the risk of fire scars in foothill areas and impacts would be less than significant. The update to the Circulation Element updates policies related to transportation analysis thresholds and does not include any policies with the potential to impact special status species.

The 2015 General Plan includes policies and implementation measures, respectively, designed to minimize impacts on sensitive species. However, none of these policies or implementation measures specifically address nesting birds or pallid bats. Nesting birds and raptors may use trees and landscaping on the opportunity sites that may be removed during development activities. Pallid bats may roost in trees on Sites A-D, which are not used for residential uses and therefore, not occupied throughout the night. This would be a potentially significant impact.

Mitigation Measures:

> **BIO-1: Focused Bat Surveys.** Prior to any demolition activities, a bat survey shall be conducted by a qualified biologist. Where project-related implementation, construction, and activities would occur near potential roosting habitat for bats, such as buildings or tall trees, a qualified bat specialist shall conduct bat surveys within these areas (plus a 100-foot buffer as access allows) to identify potential habitat that could provide daytime and/or nighttime roost sites, and any maternity roosts. Surveys should be conducted using acoustic recognition technology to maximize detection of bats. A discussion of survey results, including negative findings should be provided to the City. Depending on the survey results, a qualified bat specialist should discuss potentially significant effects of the project on bats and include species specific mitigation measures to reduce impacts to below a level of significance. Surveys, reporting, and preparation of robust mitigation measures by a qualified bat specialist should be completed and submitted to the City prior to any project-related demolition, ground-disturbing activities, or vegetation removal at or near locations of roosting habitat for bats.
>
> If bats are not detected, but the bat specialist determines that roosting bats may be present at any time of year and could roost at a given location, species specific mitigation measures shall be required to reduce impacts to below a level of significance. If maternity roosts are found, to the extent feasible, work should be scheduled between October 1 and February 28, outside of the maternity roosting season when young bats are present but are yet ready to fly out of the roost (March 1 to September 30).
>
> If maternity roosts are found and the City determines that impacts are unavoidable, a qualified bat specialist should conduct a preconstruction survey. Acoustic recognition technology should

be used to maximize the detection of bats. Each tree identified as potentially supporting an active maternity roost should be closely inspected by the bat specialist no more than 7 days prior to tree disturbance to determine the presence or absence of roost bats more precisely. If maternity roosts are detected, trees/structures determined to be maternity roosts should be left in place until the end of the maternity season. Work should not occur within 100 feet of or directly under or adjacent to an active roost. Work should also not occur between 30 minutes before subset and 30 minutes after sunrise.

BIO-2: Nesting Bird and Raptor Surveys. Ground-disturbing activities (e.g., mobilizing, staging, drilling, and excavating) and vegetation removal shall occur outside of the avian breeding season which generally runs from February 15 through August 31 (as early as January 1 for some raptors) to avoid take of birds, raptors, or their eggs.

Surveys shall be conducted to detect protected native birds and raptors occurring in suitable nesting habitat that may be disturbed and any other such habitat within 300 feet of the project disturbance area, to the extent allowable and accessible. For raptors, this radius shall be expanded to 500 feet and 0.5 mile for special status species, if feasible. Project personnel, including all contractors working on site, shall be instructed on the sensitivity of the area. Reductions in the nest buffer distance may be appropriate depending on the avian species involved, ambient levels of human activity, screening vegetation, or possibly other factors.

Future development would be required to comply with the BIO-1 and BIO-2, which would avoid impacts to pallid bat by requiring a site survey for pallid pats prior to commencing demolition activities. These mitigation measures would avoid impacts to nesting birds and raptors by either avoiding site clearing, demolition or grading activities during the breeding/nesting season or conducting a site survey for nesting birds prior to commencing such activities during the nesting season.

As such, implementation of this measure would reduce the potentially significant impacts to less-than-significant. Therefore, impacts related to nesting birds and special-status bats would be less than significant with mitigation incorporated.

Impact C-2: Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Impact Analysis:

The 2015 General Plan EIR determined that the 2015 General Plan Update would not impact sensitive habitat in the City. The City only contains remnants of one sensitive natural community, Open Englemann Oak Woodland; however, this habitat only occurs on relatively moist sites on gentle slopes and valley bottoms. These areas of the City have been developed with residential uses and are not in their natural condition. Additionally, the 2015 General Plan Update includes policies and implementation measures that would protect and minimize impacts on riparian habitat and all other natural resources in the City.

Sites 1-4 and A-D are all developed with urbanized uses and do not contain any riparian habitat. The update to the Land Use Element includes establishing two new multi-family residential land use categories (R-3-20 and R-3-30), creating an Affordable Housing Overlay on select congregational sites, along with minor changes to the Land Use table and map to accommodate residential land uses on the sites identified to meet the RHNA allocation. These land use changes would not impact any riparian habitat as there is no riparian habitat on Sites 1-4 and A-D.

The update to the Safety Element includes policies related to limiting risk from wildfire, including avoiding development in Very High Fire Severity Zones, updating maps related to fire hazards, and developing a Vegetation Management Program. While these policies would result in the removal of some vegetation, this removal would be limited to areas that are predominately developed with urbanized uses. Some vegetation could be removed from riparian areas in the foothill slope; however, the City is required to consult with CDFW for any work in areas subject to CDFW regulations. Therefore, should removal be required in riparian areas it would be conducted according to CDFW requirements and impacts would be less than significant.

Additionally, these polices would also limit new development in the canyon and foothill slope area. The update to the Circulation Element updates policies related to transportation analysis thresholds and does not include any policies with the potential to impact riparian habitat.

Therefore, similar to the 2015 General Plan Update, the project would not result in impacts to riparian habitat and impacts would be less than significant.

Mitigation Measures:

None required.

Impact C-3: Would the project have a substantial adverse effect on state or federally protected wetlands (including but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Impact Analysis:

The 2015 General Plan EIR determined that the 2015 General Plan Update would not impact state or federally protected wetlands as natural waterways in the City are in the foothill area that would be designated Natural Open Space and would not be designated for development. Therefore, most such waterways would not be disturbed by future development that would be accommodated by the General Plan Update. Any future development that would be accommodated by the General Plan Update that would disturb or impact waters, wetlands, and/or riparian habitats would be required to prepare site-specific environmental documentation (e.g., jurisdictional delineation) in accordance with CEQA and the requirements of the applicable regulatory agency (e.g., CDFW, USFWS, Corps) to ensure that no impacts would occur or that impacts would be mitigated accordingly. Additionally, the 2015 General Plan Update includes policies and implementation measures that would protect and minimize impacts on riparian habitat and all other natural resources in the City.

Sites 1-4 and A-D are all developed with urbanized uses and do not contain any state or federally protected wetlands. The update to the Land Use Element includes establishing two new multi-family residential land use categories (R-3-20 and R-3-30), creating an Affordable Housing Overlay on select congregational sites, along with minor changes to the Land Use table and map to accommodate residential land uses on the sites identified to meet the RHNA allocation. These land use changes would not impact any riparian habitat as there is no riparian habitat on Sites 1-4 and A-D.

The update to the Safety Element includes policies related to limiting risk from wildfire, including avoiding development in Very High Fire Severity Zones, updating maps related to fire hazards, and developing a Vegetation Management Program. While these policies would result in the removal of some vegetation, this removal would be limited to areas that are predominately developed with urbanized uses. Some vegetation could be removed from riparian areas in the foothill slope; however, the City is required to consult with CDFW for any work in areas subject to CDFW regulations. Therefore, should removal be

required in riparian areas it would be conducted according to CDFW requirements and reduce the risk of fire scars in foothill areas and impacts would be less than significant. Additionally, these polices would also limit new development in the canyon and foothill slope area. The update to the Circulation Element updates policies related to transportation analysis thresholds and does not include any policies with the potential to wetlands.

Therefore, similar to the 2015 General Plan Update, the project would not result in impacts to state or federally protected wetlands and impacts would be less than significant.

Mitigation Measures:

None required.

Impact C-4: Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species to with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Impact Analysis:

The 2015 General Plan EIR determined that implementation of the 2015 General Plan Update would not a significant impact on wildlife movement corridors. Furthermore, as with sensitive species, natural communities, and wetlands, the 2015 General Plan Update and Implementation Program contain policies and implementation measures designed to minimize impacts on wildlife movement corridors. Therefore, future development that would be accommodated by the 2015 General Plan Update, any land use changes proposed under the 2015 General Plan Update, and any new or updated policies of the 2015 General Plan Update were found by the 2015 General Plan EIR to not create a significant impact to wildlife movement corridors. In addition, future development that would be accommodated by the 2015 General Plan Update and would involve the removal of trees and other vegetation would be required to comply with the Migratory Bird Treaty Act (MBTA) to ensure that impacts do not occur.

Areas of the City that could be used by wildlife as regional wildlife movement corridors are located predominately in the foothill slope areas of the City. While there could be corridors used by wildlife in the hillside areas of the City that the opportunity sites are located in, Sites 1-4 and A-D are all developed with urbanized uses and are not located on or in natural open space areas, on riparian corridors, or on a wetland.

The update to the Land Use Element includes establishing two new multi-family residential land use categories (R-3-20 and R-3-30), creating an Affordable Housing Overlay on select congregational sites, along with minor changes to the Land Use table and map to accommodate residential land uses on the sites identified to meet the RHNA allocation. These land use changes would not impact any corridors used by wildlife as Sites 1-4 and A-D are all developed with urbanized uses and are not located on or in natural open space areas, on riparian corridors, or on a wetland.

The update to the Safety Element includes policies related to limiting risk from wildfire, including avoiding development in Very High Fire Severity Zones, updating maps related to fire hazards, and developing a Vegetation Management Program. While these policies would result in the removal of some vegetation, this removal would be limited to areas that are predominately developed with urbanized uses. Some vegetation could be removed from areas in the foothill slope used by wildlife; however, the City is required to consult with CDFW for any work in areas subject to CDFW regulations. Therefore, should removal be required in riparian areas it would be conducted according to CDFW requirements and impacts would be less than significant. Additionally, these polices would also limit new development in the canyon and

foothill slope area. The update to the Circulation Element updates policies related to transportation analysis thresholds and does not include any policies with the potential to impact wildlife corridors.

Therefore, similar to the 2015 General Plan Update, the project would not result in impacts to migratory wildlife corridors and impacts would be less than significant.

Mitigation Measures:

None required.

Impact C-5: Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Impact Analysis:

The 2015 General Plan EIR determined that implementation of the 2015 General Plan Update would not result in a conflict with Sierra Madre's tree preservation ordinance. Future development and/or redevelopment activities under the 2015 General Plan Update would be required to comply with Chapter 12.20 (Tree Preservation) of the City's Municipal Code and, if occurring in the Hillside Management Zone, Section 17.52.180 (Biotic Resources Management Plan). Furthermore, as with sensitive species, natural communities, wetlands, and wildlife movement corridors, the 2015 General Plan Update and Implementation Program contain policies and implementation measures designed to minimize impacts on trees and the City's tree preservation ordinance. Therefore, future development that would be accommodated by the 2015 General Plan Update, any land use changes proposed under the 2015 General Plan Update, and any new or updated policies of the 2015 General Plan Update were found by the 2015 General Plan EIR to not create a significant impact to trees and the City's tree preservation ordinance.

Sites 1-4 and A-D are all developed with urbanized uses and include common landscaping, trees, and City street trees. Future development and/or redevelopment activities under the project on these sites would be required to comply with Chapter 12.20 (Tree Preservation) of the City's Municipal Code. This chapter protects the trees on City property and protected trees (Southern California Black Walnut [Juglans californica], Engelmann Oak [Quercus engelmannii], Coast Live Oak [Quercus agrifolia], or Western Sycamore [Platanus racemosa] tree whose trunk [or collective trunks] exceed a diameter of four inches measured four feet above natural ground level).

The update to the Land Use Element includes establishing two new multi-family residential land use categories (R-3-20 and R-3-30), creating an Affordable Housing Overlay on select congregational sites, along with minor changes to the Land Use table and map to accommodate residential land uses on the sites identified to meet the RHNA allocation. These land use changes would not directly impact trees; however, they would accommodate potential development on Sites 1-4 and A-D, which contain street trees and that could contain protected types of trees. Future development and/or redevelopment activities under the project on these sites would be required to comply with Chapter 12.20 (Tree Preservation) of the City's Municipal Code.

The update to the Safety Element includes policies related to limiting risk from wildfire, including avoiding development in Very High Fire Severity Zones, updating maps related to fire hazards, and developing a Vegetation Management Program. While these policies would result in the removal of some vegetation, this removal would be limited to areas that are predominately developed with urbanized uses. Some vegetation could be removed from areas in the foothill slope; however, the City is required to consult with CDFW for any work in areas subject to CDFW regulations. Therefore, should removal be required in wooded areas it would be conducted according to CDFW requirements and impacts would be less than

significant. Additionally, these polices would also limit new development in the canyon and foothill slope area. The update to the Circulation Element updates policies related to transportation analysis thresholds and does not include any policies with the potential to impact protected trees.

Therefore, similar to the 2015 General Plan EIR, this impact would be less than significant.

Mitigation Measures:

None required.

Impact C-6: Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Impact Analysis:

The 2015 General Plan EIR determined that implementation of the 2015 General Plan Update would not conflict with an adopted conservation plan protecting biological resources because the City is not in the plan area of any habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan. Therefore, no conflicts would occur.

As Sites 1-4 and A-D are located within the City, this impact would be similar, and there would be no impact.

Mitigation Measures:

None required.

4. LEVEL OF SIGNIFICANCE AFTER MITIGATION

All impacts will be reduced to less-than significant levels with the implementation of additional mitigation measures BIO-1 and BIO-2. Once implemented, these impacts would be similar to the findings of the 2015 General Plan EIR and less than significant.

IV. ENVIRONMENTAL IMPACT ANALYSIS
D. CULTURAL RESOURCES

1. INTRODUCTION

This section of the SEIR analyzes the potential environmental effects on cultural resources from implementation of the proposed project.

A. 2015 General Plan EIR Analysis and Conclusions

The General Plan EIR determined that implementation of the 2015 General Plan Update could result in an impact on the City's historic resources. Although the 2015 General Plan Update and Implementation Program include policies and implementation measures related to preserving, maintaining, and minimizing impacts to Sierra Madre's historic resources, development and redevelopment activities could directly demolish or otherwise indirectly impact existing historic resources or potential historic resources. Therefore, impacts to historic resources were determined to be potentially significant.

The General Plan EIR determined that future development in accordance with the 2015 General Plan Update could result in an impact on previously undiscovered archaeological resources within the City. No archaeological resources or sites are known to exist within the City and the City is highly developed. Furthermore, archaeological sites are protected by a wide variety of state policies and regulations which require review of specific development project sites for identification of the potential for archaeological resources to occur as well as protection of such resources should they be encountered by development activities. However, development activities that require more extensive soil excavation than has previously occurred could potentially disturb archaeological resources, including Native American resources. Therefore, impacts to archaeological resources were determined to be potentially significant.

The General Plan EIR included an evaluation of potential impacts to paleontological resources in the Cultural Resources section, however, pursuant to revisions to the CEQA Checklist that became effective on December 28, 2018, paleontological impacts are now evaluated as part of Section V.E, Geology and Soils, of this Draft SEIR. Additionally, the CEQA Checklist has been revised to include thresholds for Tribal Cultural Resources. These thresholds are responded to in this section.

The General Plan EIR determined that significant impacts related to the disturbance of human remains resulting from future development that would be accommodated by the 2015 General Plan Update would not occur. The City is almost entirely built out and additional grading activity in undisturbed areas would be minimal; therefore, the likelihood that human remains would be discovered during site clearing and grading activities is considered to be extremely low. Furthermore, California Health and Safety Code, Section 7050.5, CEQA Section 15064.5, and Public Resources Code, Section 5097.98 mandate the proper identification, treatment and disposition of human remains should they be accidentally encountered during development activities. In addition, should the remains be identified as Native American, the regulations require notification of the Native American Heritage Commission. As such, compliance with existing law would ensure that significant impacts to human remains would not occur.

2. ENVIRONMENTAL SETTING

A. Existing Conditions

1) *Natural Geologic Setting*

The City is within the bounds of two geomorphic provinces; the southern urbanized area is within the Peninsular Ranges Geomorphic Province and the northern foothill area is within the Transverse Ranges Geomorphic Province. More specifically, Sierra Madre is found on the alluvial plain in the northwestern portion of the San Gabriel Valley. An alluvial plain is a mass deposit of sediment that is gathered over time as it is deposited by a river or stream. The City's alluvial plain consists mainly of younger alluvial fan deposits derived from the San Gabriel Mountains during the Pleistocene era in the southern developed areas while the northern foothills of the City consist of older alluvium, granitic rock, and metamorphic rocks from the Mesozoic era.

2) *Cultural Setting*

Prior to the arrival of the first Europeans in the 16th century, the Los Angeles Basin was occupied by the Gabrielino and Chumash, two major Native Californian cultures. More recent history of Sierra Madre dates to the 1880s when the area was first settled by eastern and midwestern families who moved to the Los Angeles basin and purchased land.

Historical Resources

The City has a very active historic preservation community, known as the Sierra Madre Historical Preservation Society (SMHPS), which was formed in April of 1991 when the Preservation Society of Sierra Madre joined the Historical Society and together became the Sierra Madre Historical Preservation Society. SMHPS works to collect, preserve, and exhibit the City's local historical and cultural memorabilia, which it showcases through the City's two local museums, Lizzie's Trail Inn and the Richardson House. SHMPS's volunteers operate, maintain, restore, and preserve these museums. SHMPS also showcases the City's rich history through its historic archives collection (the Sierra Madre Historical Archives) housed at the Sierra Madre Public Library. Additionally, the City has a Historic Preservation Ordinance (Municipal Code Chapter 17.82), which serves to protect and preserve the City's historic landmarks.

Over several decades SMHPS has collaborated with the City and raised public awareness to protect numerous significant structures such as the Old North Church, Old City Hall, and Richardson House. As of April 2015, the City has designated 49 local historic landmarks, which include homes, schools, churches, factories, as well as various community buildings, a trail and cemetery (see **Table V.D-1, Sierra Madre Designated Historical Landmarks**.

Table V.D-1
Sierra Madre Designated Historical Landmarks

Landmark and Location		Landmark and Location	
1.	*Casa de Monte Lado (House of the Mountain Side) - 1906 49 E. Alegria Ave.	29.	Bayard-Webster House- 1912 305 E. Laurel Ave.
2.	J. Gamble Carson House-1914	30.	*Emile Deutsch Cigar Factory-1885

Table V.D-1
Sierra Madre Designated Historical Landmarks

Landmark and Location		Landmark and Location	
	331 E. Alegria Ave.		30 W. Laurel Ave.
3.	*Dupre-Nash House-1918 551 Alta Vista Drive	31.	*Pinney House (Sierra Vista Hotel)-1887 225 N. Lima St.
4.	Willis Residence – 1941 650 Baldwin Court	32.	Hunting Lodge-1887 145 S. Lima St.
5.	*Hawks & Copps Building-1887 (c.1889-Hotel Shirley) 26 N. Baldwin Ave.	33.	*Sierra Bonita Ranch Yerxa House-1911 40 Lowell Avenue
6.	*Craftsman Bungalow-1908 169 N. Baldwin Ave.	34.	*Becker House – 1961 500 Mariposa Avenue
7.	William Deutsch House-1883 229 N. Baldwin Ave.	35.	Clark Carriage House-1885 180 S. Michillinda Ave.
8.	Ascension Church-1888 (N) 240 N. Baldwin Ave.	36.	Mt. Wilson Trail-1864 167 E. Mira Monte Ave.
9.	Twycross House-1914 123 S. Baldwin Ave.	37.	Richardson House-1890 167 E. Mira Monte Ave.
10.	El Retiro (Webb House)-1911 171 S. Baldwin Ave.	38.	*Ocean View House-1882 93 W. Mira Monte Ave.
11.	*Webster House – 1906 101 W. Bonita Ave.	39.	Tufts House-1884 159 W. Montecito Ave.
12.	Knott-Klemme Residence-1914 354 N. Canon Ave.	40.	Wilson-Bixby House-1881 397 W. Montecito Ave.
13.	Arthur Carter House-1906 425 N. Canon Ave.	41.	Jennie Reeve House -1906 Greene & Greene, Architects 197 N. Mountain Trail Ave.
14.	*Fraiberg Residence/Mt. Glen Healthatarium-1916 304-306 Churchill Rd.	42.	*Fletcher House -1890 89 Olive Avenue
15.	*Climie Sisters House- 1907 252 E. Grand View Ave.	43.	*Blumer Farmhouse – 1883 390 Olive Tree Lane
16.	Karl Graf House “Austrian Vacation Villa” - 1920s 355 E. Grand View Ave.	44.	*W. P. Caley House -1898 233 Ramona Ave.

Table V.D-1
Sierra Madre Designated Historical Landmarks

Landmark and Location	Landmark and Location
17. *C.J. Pegler House-1906 375 E. Grand View Ave.	45. Tucker House-1906 Old Schoolhouse (conversion) 43 Sierra Place 241 E. Sierra Madre Blvd.
18. Emile Deutsch House & Cigar Factory-1885 20 W. Grand View Ave.	46. *George A. Jones Sierra Madre Dairy-1923
19. *Norris House-1884 80 W. Grand View Ave.	47. Pioneer Cemetery-1884 535 E. Sierra Madre Blvd.
20. *Spanish Colonial Revival-1927 585 W. Grand View Ave.	48. Old City Hall -1927 55 W. Sierra Madre Blvd.
21. *J.C. Pegler House-1894 419 E. Highland Ave.	49. Congregational Church -1928 170 W. Sierra Madre Blvd.
22. J.C. Pegler Carriage House-1895 423 E. Highland Ave.	50. Old North Church -1890 191 W. Sierra Madre Blvd.
23. Sierra Madre Elementary School-1930 141 W. Highland Ave.	51. Hart Winery Building (Senior Citizen's Center) -1884 222 W. Sierra Madre Blvd.
24. *First Church of Christ Scientist 186 W. Highland Av	52. Caldwell/Fairbank House-1907 Louis B. Easton, Architect 647 W. Sierra Madre Blvd.
25. Decker House-1890 427 W. Highland Ave.	53. *Canyon Store, Rooms, & Tea Garden -1913 525 Woodland Drive
26. *Bailey House -1910 470 W. Highland Ave.	54. Rockledge House -1922 651 Woodland Drive
27. Barlow Villa (Alverno High School)-1928 675 W. Highland Ave.	55. Kot Kontent Cabin -1915 697 Woodland Drive
28. Kersting Court Triangle Historical Site – 1972 Kersting Court	

Source: City of Sierra Madre, March 2021.

Two of the City's landmarks (Episcopal Church of the Ascension and John Carlton Pegler House) are listed in the NRHP. Additionally, two buildings (Lizzie's Trail Inn [Tavern] and the Richardson House, which are

the two museums used by SMHPS) are designated as California Points of Historical Interest by the California State Office of Historical Preservation. In addition to these historic landmarks and buildings, the City is also home to other places of historic significance, even though they are not listed on any local, state, or national list. The other places of historic interest include the Baker-Jameson Estate, Barlow Villa (Alverno High School) Pratt House, Bella Vista Terrace/Lewis Court, Caldwell/Fairbank House, Chloe E. Jones House, Edgar W. Camp House, Essick House, Hawks Adobe, Jameson House, Kersting Court, Mount Wilson Trail, Nature Friends Lodge and Retreat, Sierra Madre Playhouse, The Sierra Madre Canyon, Various Historic Resources at the Former Willis Estate, Ward Ranch, and Wistaria Vine. With regard to the Former Willis Estate, now known as Stonegate, it is important to note that, although the Carter Barn and Macomber Cabin located within Lot 18 of this subdivision is not listed in the City's Register of Designated Historical Landmarks, a condition of approval for this subdivision prohibits demolition of these historically significant structures and requires that they be designated as historic in the City's Register by the property owner upon issuance of a certificate of occupancy for the new residence.

Archaeological Resources

Per the 1996 Sierra Madre General Plan Update EIR, no archaeological resources or sites have been identified in the City.

3) *Housing Element Project Sites*

Site 1

Site 1 is developed with nine residential buildings (single-family, duplex and fourplex units) ranging in age from 1895 to 1948. The single-family residences are of a style that is typical for this part of Sierra Madre and include a mixture of older wood structures, single-story stucco structures, and two-story stucco multi-family units. Some of the lots with older wood structures have been developed with additional dwelling units at the rear of the lot accessed by a common driveway.

Site 2

Site 2 is developed with 13 residential buildings ranging in age from 1902 to 1947. The style of these structures is typical of residential development in this area. The residences are predominately single-story stucco homes. Some of the lots have been developed with additional dwelling units at the rear of the lot accessed by a common driveway.

Site 3

Site 3 is currently developed with the Park Avenue Apartments consisting of three buildings developed in 1960 with three to six units each and a two-unit building constructed in 1935. The site also includes landscaped areas and paved parking areas.

Site 4

The site is currently developed with an older (1947) single-family home. The residence is a single-story stucco home that is typical of other homes in Sierra Madre. The site includes landscaped areas.

Site A

Site A is located on the parking area of the St. Rita Catholic Church. Construction started in 1968 and the church was dedicated on January 4, 1970. The church is modern in style. Other buildings on the site are associated with the church and include brick classroom buildings and other stucco buildings. The site is completely paved with several trees located in tree wells.

Site B

Site B is located in the parking area of the United Methodist Church at 695 W. Sierra Madre Boulevard. The church was constructed in 1956 and is modern in style. Other buildings on the site are single-story stucco buildings associated with the church. The site is completely paved.

Site C

Site C is located on the paved parking area of the Old North Church. Per the Los Angeles County Assessor, the Old North Church was constructed in 1901, with additions at the back of the church constructed in 1910 and 1911. Old North Church is a designated historic landmark in the City. The church was constructed in Dutch-style architecture. The original steeple was replaced at some point. The Old North Church was originally a Congregational church, then a Nazarene church, and is now used by the Christ Church Sierra Madre as a teen center and children's classrooms. The site is completely paved with several trees located in tree wells.

Site D

Site D is located on the asphalt play fields and parking area of the Bethany Church and School. Buildings surrounding the site vary in age and style but are predominately stucco church and school buildings and modern in style. The site is completely paved.

B. Regulatory Setting

1) *Federal*

National Historic Preservation Act

The National Historic Preservation Act (NHPA) of 1966 is the primary federal law governing the preservation of cultural and historic resources in the United States. The law establishes a national preservation program and a system of procedural protections that encourage the identification and protection of cultural and historic resources of national, state, tribal, and local significance. Primary components of the NHPA include:

- Articulation of a national policy governing the protection of historic and cultural resources.
- Establishment of a comprehensive program for identifying historic and cultural resources for listing in the National Register of Historic Places.
- Creation of a federal-state/tribal-local partnership for implementing programs established by the act.
- Requirement that under Section 106 (Protection of Historic Properties) of the NHPA, federal agencies take into consideration actions that could adversely affect historic properties listed or

eligible for listing on the National Register of Historic Places, known as the Section 106 Review Process.[1]

- Establishment of the Advisory Council on Historic Preservation, which oversees federal agency responsibilities governing the Section 106 Review Process.
- Placement of specific stewardship responsibilities on federal agencies for historic properties owned or within their control (Section 110 of the NHPA).

National Register of Historic Places

The National Register of Historic Places (NRHP) is the nation's official list of buildings, structures, objects, sites, and districts worthy of preservation because of their significance in American history, architecture, archeology, engineering, and culture. The NRHP recognizes resources of local, state, and national significance that have been documented and evaluated according to uniform standards and criteria. Authorized under the NHPA, the NRHP is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect historic and archeological resources. The NRHP is administered by the National Park Service, which is part of the U. S. Department of the Interior.

To be eligible for listing in the NRHP, a resource must meet at least one of the following criteria:

- Is associated with events that have made a significant contribution to the broad patterns of our history.
- Is associated with the lives of persons significant in our past.
- Embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components may lack individual distinction.
- Has yielded, or may be likely to yield, information important in history or prehistory.

Archaeological Resources Protection Act

The Archaeological Resources Protection Act of 1979 regulates the protection of archaeological resources and sites which are on federal and Indian lands.

Archaeological Data Preservation Act

The Archaeological Data Preservation Act (ADPA) requires agencies to report any perceived project impacts on archaeological, historical, and scientific data and requires them to recover such data or assist the Secretary of the Interior in recovering the data.

Native American Graves Protection and Repatriation Act

The Native American Graves Protection and Repatriation Act (NAGPRA) is a federal law passed in 1990 that provides a process for museums and Federal agencies to return certain Native American cultural items, such as human remains, funerary objects, sacred objects, or objects of cultural patrimony, to lineal descendants, and culturally affiliated Indian tribes.

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[1] *Section 106 Review refers to the federal review process designed to ensure that historic properties are considered during federal project planning and implementation. The Advisory Council on Historic Preservation, an independent federal agency, administers the review process, with assistance from State Historic Preservation Offices.*

2) *State*

California Public Resources Code

Archaeological and historical sites are protected pursuant to a wide variety of state policies and regulations enumerated under the California Public Resources Code. In addition, cultural resources are recognized as a non-renewable resource and therefore receive protection under the California Public Resources Code and CEQA.

- California Public Resources Code 5020–5029.5 continued the former Historical Landmarks Advisory Committee as the State Historical Resources Commission. The Commission oversees the administration of the California Register of Historical Resources, and is responsible for the designation of State Historical Landmarks and Historical Points of Interest.
- California Public Resources Code 5079–5079.65 defines the functions and duties of the Office of Historic Preservation (OHP). The OHP is responsible for the administration of federally and state mandated historic preservation programs in California and the California Heritage Fund.
- California Public Resources Code 5097.9–5097.991 provides protection to Native American historical and cultural resources, and sacred sites and identifies the powers and duties of the Native American Heritage Commission (NAHC). It also requires notification of discoveries of Native American human remains, descendants and provides for treatment and disposition of human remains and associated grave goods.

California Health and Safety Code

The discovery of human remains is regulated per California Health and Safety Code Section 7050.5:

> In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation…until the coroner…has determined…that the remains are not subject to…provisions of law concerning investigation of the circumstances, manner and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible…. The coroner shall make his or her determination within two working days from the time the person responsible for the excavation, or his or her authorized representative, notifies the coroner of the discovery or recognition of the human remains. If the coroner determines that the remains are not subject to his or her authority and…has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission.

California Register of Historic Resources

The State Historical Resources Commission has designed this program for use by state and local agencies, private groups, and citizens to identify, evaluate, register, and protect California's historical resources. The California Register of Historic Resources (CRHR) is the authoritative guide to the state's significant historical and archeological resources. It encourages public recognition and protection of resources of architectural, historical, archeological, and cultural significance; identifies historical resources for state and local planning purposes; determines eligibility for state historic preservation grant funding; and affords certain protections under CEQA.

To be eligible for listing in the CRHR, a resource must meet at least one of the following criteria:

- Associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States.
- Associated with the lives of persons important to local, California or national history.
- Embodies the distinctive characteristics of a type, period, region, or method of construction or represents the work of a master or possesses high artistic values.
- Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

In addition to having significance, resources must have integrity for the period of significance. The period of significance is the date or span of time within which significant events transpired or significant individuals made their important contributions. Integrity is the authenticity of a historical resource's physical identity as evidenced by the survival of characteristics or historic fabric that existed during the resource's period of significance. Alterations to a resource or changes in its use over time may have historical, cultural, or architectural significance. Simply, resources must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. A resource that has lost its historic character or appearance may still have sufficient integrity for the CRHR, if, under the fourth criterion, it maintains the potential to yield significant scientific or historical information or specific data.

California Historical Landmarks

California Historical Landmarks are buildings, structures, sites, or places that have been determined to have statewide historical significance. The resource must be approved for designation by the County Board of Supervisors or the City/Town Council in whose jurisdiction it is located; be recommended by the State Historical Resources Commission; and be officially designated by the Director of California State Parks. A resource must meet at least one of these following criteria:

- Be the first, last, only, or most significant of its type in the state or within a large geographic region (Northern, Central, or Southern California).
- Be associated with an individual or group having a profound influence on the history of California.
- Be a prototype of, or an outstanding example of, a period, style, architectural movement, or construction or is one of the more notable works or the best surviving work in a region of a pioneer architect, designer, or master builder.

California Points of Historical Interest

California Points of Historical Interest are sites, buildings, features, or events that are of local (city or county) significance and have anthropological, cultural, military, political, architectural, economic, scientific, or technical, religious, experimental, or other value. Points of Historical Interest designated after December 1997 and recommended by the State Historical Resources Commission are also listed in the CRHR. No historical resource may be designated as both a landmark and a point. If a point is subsequently granted status as a landmark, the point designation is retired.

To be eligible for designation as a Point of Historical Interest, a resource must meet at least one of the following criteria:

- The first, last, only, or most significant of its type within the local geographic region (city or county).
- Associated with an individual or group having a profound influence on the history of the local area.
- A prototype of, or an outstanding example of, a period, style, architectural movement, or construction or is one of the more notable works or the best surviving work in the local region of a pioneer architect, designer, or master builder.

2010 California Historic Building Code

The 2010 California Historic Building Code—California Code of Regulations, Title 24, Part 8 (adopted by reference in Chapter 15.22 [Historic Building Code] of the City's Municipal Code)—provides regulations for the preservation, restoration, rehabilitation, relocation, or reconstruction of buildings or properties designated as qualified historical buildings or properties. The California Historic Building Code is intended to provide solutions for the preservation of qualified historical buildings or properties, to promote sustainability, to provide access for persons with disabilities, to provide a cost-effective approach to preservation, and to provide for the reasonable safety of the occupants or users.

Mills Act

Under the Mills Act, California Government Code Sections 50280 et seq., a city or county may contract with the owner of any qualified historical property to restrict the use of the property.

AB 52

Assembly Bill 52 (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment.

The act amended California PRC Section 5097.94, and added PRC Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3. The primary intent of AB 52 is to involve California Native American Tribes early in the environmental review process and to establish a category of resources related to Native Americans, known as tribal cultural resources, that require consideration under CEQA. PRC Section 21074(a)(1) and (2) defines tribal cultural resources as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe" that are either included or determined to be eligible for inclusion in the California Register or included in a local register of historical resources, or a resource that is determined to be a tribal cultural resource by a lead agency, in its discretion and supported by substantial evidence. A tribal cultural resource is further defined by PRC Section 20174(b) as a cultural landscape that meets the criteria of subdivision (a) to the extent that the landscape is geographically defined in terms of the size and scope of the landscape. PRC Section 20174(c) provides that a historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a "nonunique archaeological resource" as defined in subdivision (h) of Section 21083.2 may also be a tribal cultural resource if it conforms with the criteria of subdivision (a).

PRC Section 21080.3.1 requires that, within 14 days of a lead agency determining that an application for a project is complete, or a decision by a public agency to undertake a project, the lead agency provide formal notification to the designated contact, or a tribal representative, of

California Native American Tribes that are traditionally and culturally affiliated with the geographic area of the project (as defined in PRC Section 21073) and who have requested in writing to be informed by the lead agency of projects within their geographic area of concern. Tribes interested in consultation must respond in writing within 30 days from receipt of the lead agency's formal notification and the lead agency must begin consultation within 30 days of receiving the tribe's request for consultation.

PRC Section 21080.3.2(a) identifies the following as potential consultation discussion topics: the type of environmental review necessary; the significance of tribal cultural resources; the significance of the project's impacts on the tribal cultural resources; project alternatives or appropriate measures for preservation; and mitigation measures. Consultation is considered concluded when either: (1) the parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or (2) a party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached.

3) *Local*

City of Sierra Madre Municipal Code

The City's Municipal Code contains existing standards and regulations that help mitigate potential impacts on historic resources. The following is a description of the provisions of the City's Municipal Code that are applicable to the General Plan Update.

- **Chapter 15.22 (Historic Building Code).** This chapter adopts by reference the 2010 California Historic Building Code, with certain amendments.
- **Chapter 17.82 (Historic Preservation).** This chapter serves to protect and preserve the City's historic landmarks through a partnership between the Planning Commission, City Council and the property owners/residents, the business sector, and the community at large to retain and protect those historic landmarks that preserve and enhance the City's small-town atmosphere.

City of Sierra Madre 2035 General Plan

The following are relevant policies and implementation measures of the Sierra Madre General Plan and Implementation Program.

General Plan Policies

Land Use Element

- Policies L8.4 / L12.3 / L14.3 / L18.3 / L22.3 / L26.3 / L30.3 / L39.3: Conduct a historic resources survey to encourage retention of existing older homes and encourage the retention of these homes where there are conservation methods.
- Policies L8.5 / L12.4 / L14.4 / L18.4 / L22.4 / L26.4 / L30.4 / L39.4: Provide incentives for property owners to retrofit historically designated homes with water saving fixtures.
- Policy L41.2(d): Allow for the expansion of existing institutional sites, including height and density beyond that allowed in adjacent commercial and residential areas, provided that a comprehensive master plan is approved by the City which demonstrates that the project: Preserves historic structures to the maximum extent possible.

- Policy L41.2(e): Allow for the expansion of existing institutional sites, including height and density beyond that allowed in adjacent commercial and residential areas, provided that a comprehensive master plan is approved by the City which demonstrates that the project: Provides additional benefits to the community above those which can be exacted to account for the direct impacts of the development. Such benefits can include making available parking to the public when not needed for the use, dedicating on-site recreational space or parkland facilities for public meetings, making day care available to the public, contributing to park site acquisition, and offsetting impacts to historic structures with monetary contribution to a preservation fund.
- Policy L46.1: Complete and utilize a comprehensive survey of Sierra Madre's significant historic resources according to the guidelines from the State Office of Historic Preservation.
- Policy L46.2: Compile and maintain an inventory (historic register) of those historical resources within the City which are identified as significant.
- Policy L46.3: Create a list of potential historic resources (those identified by the comprehensive survey under Policy L46.1) for special consideration under CEQA, to the extent that they would otherwise be exempt.
- Policy L46.4: Establish special zones or districts characterized by the presence of historical structures.
- Policy L46.5: Share historic preservation information with the public.
- Policy L46.6: Develop an information base of preservation techniques and economic incentives for the benefit of historic property owners.
- Policy L47.1: Consider obtaining Certified Local Government status from the State Office of Historic Preservation.
- Policy L47.2: Encourage property owners to submit applications to qualify appropriate properties and buildings on the National Register of Historic Places, the State Register, or the City's Register of Historic Landmarks.
- Policy L47.3: Remove constraints on the use of historic structures by allowing for adaptive reuse of historic properties, waiving development standards, and through other appropriate means.
- Policy L47.4: Develop guidelines for rehabilitation and new construction, demolition control, and regulation of uses in designated structures. Demolition control to include payment of significant fines and recompense for destroying historic resources without having followed applicable procedures.
- Policy L47.5: Ensure that, if and when landmarks are renovated by the property owner, it is done according to the Secretary of the Interior's Standards, which accomplish the following:
    - Preservation of the distinguishing features or character of the property and its environment;
    - Allow for compatible uses which provide the maximum appreciation of the resource;
    - Allow for renovations which complement the neighborhood or historic context within which the resource exists.

- Policy L47.6: Consider the relaxation of current building and zoning codes, as necessary, to preserve significant structures, while ensuring that basic health and safety goals are met.
- Policy L47.7: Support tax incentives, protective covenants, preservation easements, code modifications, and other methods deemed mutually agreeable by the City and the property owner which will help to preserve historic resources.
- Policy L47.8: Allow for adaptive re-use of significant architectural and historical structures provided that the use is compatible with the neighborhood in which it is located and with the approval of the Planning Commission.
- Policy L47.9: At such time any loans or grants are made available through public or private agencies for the purpose of renovating landmarks, assist in obtaining the grant or loan on behalf of the property owner.
- Policy L47.10: Provide staff with professional historic expertise to support for the preservation program.
- Policy L47.11: Maintain a historic preservation ordinance which has, as its purpose, the voluntary participation of property owners in the preservation of historic resources.
- Policy L47.12: Maintain and enact policies, regulations and programs to facilitate historic preservation.

Hazard Prevention Element

- Policy Hz11.3: Promote seismic upgrading of older residential and commercial structure with special attention given to historic structures.

Implementation Program Measures

Historic Preservation Implementation Program

- Measure IM-1: The City shall engage the services of a historic preservation consultant to complete a comprehensive survey of the City's significant historic resources according to the State Office of Historic Preservation guidelines.
- Measure IM-2: The City shall continue to maintain and update its Register of Historic Cultural Landmarks.
- Measure IM-3: The City shall establish historic overlay zones or districts characterized by the presence of historic structures.
- Measure IM-4: The City shall make available information regarding historic preservation programs and tours of local historic resources.
- Measure IM-5: The City shall seek the assistance of the Historic Preservation Society in developing an information base of preservation techniques and economic incentives for the benefit of historic property owners.
- Measure IM-6: The City shall consider applying to the State Office of Historic Preservation to obtain Certified Local Government Status.

- Measure IM-7: The City shall provide information regarding designation of historic resources and Mills Act Contracts to owners of properties identified in the comprehensive survey of historic resources.
- Measure IM-8: The City shall review and amend the Historic Preservation Ordinance to remove constraints on the use of historic structures.
- Measure IM-9: The City shall amend the Historic Preservation Ordinance to include guidelines for rehabilitation and new construction, demolition control and regulation of uses in historically designated structures.
- Measure IM-10: The City shall continue to require approval of a Certificate of Appropriateness for alterations to historic properties that are visible to the public.
- Measure IM-11: The City shall review the building and zoning codes to identify opportunities for relaxation of standards to help preserve historic structures while still meeting health and safety standards.
- Measure IM-12: The City shall amend the Historic Preservation Ordinance as needed to include appropriate methods, such as but not limited to, tax incentives, protective covenants, preservation easements, to help preserve historic resources.
- Measure IM-13: The City shall continue to allow for adaptive reuse of significant historic structures pursuant to the Historic Preservation Ordinance.
- Measure IM-14: The City shall assist property owners in obtaining available preservation loans and grants.
- Measure IM-15: The City shall set aside funds to retain a professional advisor or seek a qualified volunteer to provide guidance and interpretation for staff on the use and interpretation of applicable regulations and technical preservation information.

Seismic Safety Implementation Program

- Measure IM-4: The City shall make information available to residents, property owners and emergency responders regarding seismic upgrade of buildings, including historic structures.

3. ENVIRONMENTAL IMPACTS AND MITIGATIONS

A. Threshold of Significance

Appendix G of the CEQA Guidelines provides thresholds address impacts to cultural resources. Specifically, the Guidelines state that the proposed project may have an adverse significant cultural resources impact if it would:

a) Create a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5;
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5; or
c) Disturb any human remains, including those interred outside of dedicated cemeteries.

d) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or

b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

B. Project Impacts and Mitigation Measures

Impact D-1: Would the project create a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?

Impact Analysis:

The General Plan EIR determined that implementation of the 2015 General Plan Update could result in an impact on the City's historic resources. Although the 2015 General Plan Update and Implementation Program include policies and implementation measures related to preserving, maintaining, and minimizing impacts to Sierra Madre's historic resources, development and redevelopment activities could directly demolish or otherwise indirectly impact existing historic resources or potential historic resources. Therefore, impacts to historic resources were determined to be potentially significant and mitigation required to protect historic resources.

Sites 1-4 are currently developed with structures and Sites A-D are fully paved parking areas of church buildings. Site 1 is developed with nine residential buildings (single-family, duplex and fourplex units) ranging in age from 1895 to 1948. Site 2 is developed with 13 residential buildings ranging in age from 1902 to 1947. Site 3 is currently developed with the Park Avenue Apartments consisting of three buildings developed in 1960 with three to six units each and a two-unit building constructed in 1935. Site 4 is currently developed with an older (1947) single-family home. Sites 1-4 are developed with structures that seem typical of residential construction in Sierra Madre. However, none of the structures have been evaluated to determine if they are historic resources.

Sites A-D are located on paved parking and grass areas surrounding churches. Site C is located on the paved parking area of the Old North Church. Per the Los Angeles County Assessor, the Old North Church was constructed in 1901, with additions at the back of the church constructed in 1910 and 1911. Old North Church is a designated historic landmark in the City. No demolition or construction is proposed to the Old North Church; however, impacts could result from changes to context on the site surrounding the Old North Church. Site A is located on the parking area of the St. Rita Catholic Church. Construction started in 1968 and the church was dedicated on January 4, 1970. Site B is located in the parking area of the United Methodist Church, which was constructed in 1956. Site D is located on the asphalt play fields and parking area of the Bethany Church and School. Although no demolition or construction is proposed to St. Rita Catholic Church, the United Methodist Church, or Bethany Church and School, these buildings are old enough that they could be determined to be historic resources. Similar to the finding of the 2015 General Plan Update EIR, this impact is potentially significant.

The update to the Land Use Element includes establishing two new multi-family residential land use categories (R-3-20 and R-3-30), creating an Affordable Housing Overlay on select congregational sites, along with minor changes to the Land Use table and map to accommodate residential land uses on the sites identified to meet the RHNA allocation. The land use designation changes and rezoning would allow development on Sites 1-4 and A-D, which could result in impacts to historic resources.

The update to the Safety Element includes policies related to limiting risk from wildfire, including avoiding development in Very High Fire Severity Zones, updating maps related to fire hazards, and developing a Vegetation Management Program. These policies would not have the potential to create impacts to historic resources as they would not create any changes to buildings on the sites. The update to the Circulation Element updates policies related to transportation analysis thresholds and does not include any policies with the potential to result in the adverse changes in historic resources.

Mitigation Measures:

To ensure that impacts to historic resources remain less than significant, the 2015 General Plan Update EIR included the following measures:

CUL-1: GP EIR MM 5.4-1.

4.1 Prior to any construction activities of individual projects that may affect historic resources, a historic resources technical assessment/study shall be performed by an architectural historian or historian who meets the Secretary of the Interior's Professional Qualifications Standards requirements in architectural history or history; the technical assessment/study shall be submitted to the City of Sierra Madre for review and approval. The technical assessment/study shall include a records search at the South Central Coastal Information Center to determine if any resources that may potentially be affected by the project have been previously recorded, evaluated, and/or designated on the National Register of Historic Places or California Register of Historic Resources, or any other state or local historic resources registry/database. Following the records search, the qualified architectural historian or historian shall conduct a reconnaissance-level and/or intensive-level survey in accordance with the California Office of Historic Preservation guidelines to identify any previously unrecorded potential historic resources that may potentially be affected by the proposed project. If the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code Section 5024.1, Title 14 CCR, Section 4852), mitigation shall be identified within the technical study that ensures the value of the historic resource is maintained.

4.2 To ensure that individual projects requiring the relocation, rehabilitation, or alteration of a historic resource do not impair its significance, the Secretary of the Interior's Standards for the Treatments of Historic Properties (Standards) shall be used. The application of the standards shall be overseen by a qualified architectural historian or historic architect meeting the Secretary of the Interior's Professional Qualifications Standards. Prior to any construction activities that may affect the historic resource, a report identifying and specifying the treatment of character-defining features and construction activities shall be provided to the City of Sierra Madre.

4.3 If an individual project would result in the demolition or significant alteration of a historic resource, it cannot be mitigated to a less than significant level. However, recordation of the resource prior to construction activities will assist in reducing adverse impacts to the resource to the greatest extent possible (but not avoid a significant impact). Recordation shall take the form of Historic American Buildings Survey, Historic American Engineering Record, or Historic American Landscape Survey documentation, and shall be performed by an architectural historian or

historian who meets the Secretary of the Interior's Professional Qualifications Standards. Documentation shall include an architectural and historical narrative; medium- or large-format black-and-white photographs, negatives, and prints; and supplementary information such as building plans and elevations and/or historic photographs. Documentation shall be reproduced on archival paper and placed in appropriate local, state, or federal institutions. The specific scope and details of documentation will be developed at the project level.

Future development on the opportunity sites would be required to comply with the CUL-1, which would reduce impacts to historic resources by documenting historic resources (or lack of historic resources) on the sites and ensuring that future development on the opportunity sites does not significantly impair the significance of historic resources. Therefore, impacts related to historic resources would be less than significant with mitigation incorporated.

Impact D-2: Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

Impact Analysis:

The General Plan EIR determined that future development in accordance with the 2015 General Plan Update could result in an impact on previously undiscovered archaeological resources within the City. No archaeological resources or sites are known to existing within the City and the City is highly developed. However, any development that requires excavation of undisturbed ground or to levels below current foundations has the potential to unearth unique archeological resources. Therefore, impacts to archaeological resources were determined to be potentially significant and mitigation required to protect any discovered archaeological resources.

Sites 1-4 are currently developed with structures and Sites A-D are fully paved. All sites have been developed previously and the soil has been disturbed. However, redevelopment on the sites would require grading and excavation, which has the potential to unearth unknown or undocumented archaeological resources on the sites. Archaeological sites are protected by a wide variety of state policies and regulations enumerated under the California Public Resources Code. Per Public Resources Code Section 21083.2 of CEQA, the lead agency is required to determine whether a development project may have a significant effect on archaeological resources. If the lead agency determines that the project may have a significant effect on unique archaeological resources, the project-level CEQA document being prepared for the development project is required to address the issue of those resources. However, similar to the finding of the 2015 General Plan Update EIR, this impact is potentially significant.

The update to the Land Use Element includes establishing two new multi-family residential land use categories (R-3-20 and R-3-30), creating an Affordable Housing Overlay on select congregational sites, along with minor changes to the Land Use table and map to accommodate residential land uses on the sites identified to meet the RHNA allocation. The land use designation changes and rezoning would allow development on Sites 1-4 and A-D, which could result in impacts to previously unknown archaeological resources.

The update to the Safety Element includes policies related to limiting risk from wildfire, including avoiding development in Very High Fire Severity Zones, updating maps related to fire hazards, and developing a Vegetation Management Program. These policies are limited in their potential to create ground disturbance that would uncover previously unknown archaeological resources. The update to the Circulation Element updates policies related to transportation analysis thresholds and does not include any policies with the potential to result in the adverse changes in archaeological resources.

Mitigation Measures:

To ensure that impacts to archaeological resources remain less than significant, the 2015 General Plan Update EIR included the following measures:

CUL-2: GP EIR MM 5.4-2.

4.4 Prior to the issuance of any grading permit, applicant's for future development projects shall demonstrate to the City's Planning and Community Preservation Department that a Los Angeles County-certified archaeologist has been retained to observe grading activities greater than six feet in depth and salvage and catalogue archaeological resources as necessary. The archaeologist shall be present at the pre-grade conference, shall establish procedures for archaeological resource surveillance, and shall establish, in cooperation with the applicant, procedures for temporarily halting or redirecting work to permit the sampling, identification, and evaluation of the artifacts as appropriate.

If subsurface cultural resources are inadvertently discovered during ground-disturbing activities (e.g., construction, devegetation, etc.), the construction contractor shall ensure that all work stops within 25 feet of the find until the qualified archaeologist can assess the significance of the find and, if necessary, shall develop appropriate treatment or disposition of the resources in consultation with the City of Sierra Madre and representatives of any affected Native American tribes. The archaeologist monitor, in coordination with the construction contractor, shall have the authority to halt any project-related activities that may be adversely impacting potentially significant cultural resources. Suspension of ground disturbances in the vicinity of the discoveries shall not be lifted until an archaeologist monitor has evaluated the discoveries to assess whether they are classified as significant cultural resources, pursuant to the California Environmental Quality Act.

If the archaeological resources are found to be significant, then the project applicant shall be required to perform data recovery, professional identification, radiocarbon dates as applicable, and other special studies; submit materials to the California State University, Fullerton; and provide a comprehensive final report to the City including appropriate records for the California Department of Parks and Recreation (Building, Structure, and Object Record; Archaeological Site Record; or District Record, as applicable). Any materials meeting significant criteria under CEQA should be donated to the County of Los Angeles or an accredited repository such as the Natural History Museum of Los Angeles County. Materials including isolates that do not meet those criteria may be offered to the Sierra Madre Historical Preservation Society or local school district for educational use.

Future development on the opportunity sites would be required to comply with the CUL-2, which would avoid impacts to archaeological resources by monitoring construction activity, recording any potential resources if found, and data recovery. Therefore, impacts related to archaeological resources would be less than significant with mitigation incorporated.

Impact D-3: Would the project disturb any human remains, including those interred outside of dedicated cemeteries?

Impact Analysis:

The General Plan EIR determined that significant impacts related to the disturbance of human remains resulting from future development accommodated by the 2015 General Plan Update would not occur as

City is almost entirely built out and additional grading activity in undisturbed areas would be minimal. Therefore, the likelihood that human remains would be discovered during site clearing and grading activities is considered extremely low.

Sites 1-4 are currently developed with structures and Sites A-D are fully paved. Other than the Sierra Madre Pioneer Cemetery at 501 E. Sierra Madre Boulevard, there are no known cemeteries near or on any of the opportunity sites. Redevelopment on the sites would require grading and excavation, which has the potential to unearth human remains that are unknown or undocumented on the sites. However, similar to the 2015 General Plan Update EIR this likelihood would be extremely low. Furthermore, California Health and Safety Code, Section 7050.5, CEQA Section 15064.5, and Public Resources Code, Section 5097.98 mandate the proper identification, treatment and disposition of human remains should they be accidentally encountered during development activities. In addition, should the remains be identified as Native American, the regulations require notification of the Native American Heritage Commission. As such, similar to the 2015 General Plan EIR, compliance with existing law would ensure that significant impacts to human remains would not occur.

The update to the Land Use Element includes establishing two new multi-family residential land use categories (R-3-20 and R-3-30), creating an Affordable Housing Overlay on select congregational sites, along with minor changes to the Land Use table and map to accommodate residential land uses on the sites identified to meet the RHNA allocation. The land use designation changes and rezoning would allow development on Sites 1-4 and A-D, which could result in impacts to previously unknown buried human remains. Like the 2015 General Plan EIR, compliance with existing law would ensure that significant impacts to human remains would not occur.

The update to the Safety Element includes policies related to limiting risk from wildfire, including avoiding development in Very High Fire Severity Zones, updating maps related to fire hazards, and developing a Vegetation Management Program. These policies are limited in their potential to create ground disturbance that would uncover previously unknown human remains. The update to the Circulation Element updates policies related to transportation analysis thresholds and does not include any policies with the potential to result in the disturbance of human remains.

Mitigation Measures:

None required.

Impact D-4: Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or

b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Impact Analysis:

Tribal Cultural Resources were not specifically evaluated in the 2015 General Plan EIR and are included here to respond to revisions to CEQA in compliance with Assembly Bill 52, effective July 15, 2015.

Pursuant to Assembly Bill 52, California tribes now have the ability to establish, through a formal notice letter, a standing request to consult with a lead agency regarding any proposed project subject to CEQA in the geographic area with which the tribe is traditionally and culturally affiliated. The Native American Heritage Commission has authority to verify the tribes' cultural affiliation. A lead agency must provide written notification to requesting tribes on its notice list within 14 days of a decision to undertake a project or a determination that a project application is complete. Notice to the tribes must include a brief project description, the project location, and the lead agency's contact information. A tribe then has 30 days to request consultation. If the tribe does not respond in that period or writes to decline consultation, the lead agency has no further obligation. The City of Sierra Madre sent the tribal notice to the seven California Native American individuals and organizations on the NAHC list on April 15 2021. The City did not receive any requests for consultation.

Although no tribes requested consultation, there is still the potential to impact unknown Tribal Cultural Resources. Similar to Impact D-1, redevelopment on the sites would require grading and excavation, which has the potential to unearth unknown or undocumented Tribal Cultural Resources on the sites. Archaeological sites, and therefore, Tribal Cultural Resources, are protected by a wide variety of state policies and regulations enumerated under the California Public Resources Code. As required for Impact D-1, Mitigation Measure CUL-1 would be required.

Mitigation Measures:

CUL-1: GP EIR MM 5.4-2.

4.1 Prior to the issuance of any grading permit, applicant's for future development projects shall demonstrate to the City's Planning and Community Preservation Department that a Los Angeles County-certified archaeologist has been retained to observe grading activities greater than six feet in depth and salvage and catalogue archaeological resources as necessary. The archaeologist shall be present at the pre-grade conference, shall establish procedures for archaeological resource surveillance, and shall establish, in cooperation with the applicant, procedures for temporarily halting or redirecting work to permit the sampling, identification, and evaluation of the artifacts as appropriate.

4.2 If subsurface cultural resources are inadvertently discovered during ground-disturbing activities (e.g., construction, devegetation, etc.), the construction contractor shall ensure that all work stops within 25 feet of the find until the qualified archaeologist can assess the significance of the find and, if necessary, shall develop appropriate treatment or disposition of the resources in consultation with the City of Sierra Madre and representatives of any affected Native American tribes. The archaeologist monitor, in coordination with the construction contractor, shall have the authority to halt any project-related activities that may be adversely impacting potentially significant cultural resources. Suspension of ground disturbances in the vicinity of the discoveries shall not be lifted until an archaeologist monitor has evaluated the discoveries to assess whether they are classified as significant cultural resources, pursuant to the California Environmental Quality Act.

4.3 If the archaeological resources are found to be significant, then the project applicant shall be required to perform data recovery, professional identification, radiocarbon dates as applicable, and other special studies; submit materials to the California State University, Fullerton; and provide a comprehensive final report to the City including appropriate records for the California Department of Parks and Recreation (Building, Structure, and Object Record; Archaeological Site Record; or District Record, as applicable). Any materials meeting significant criteria under CEQA should be donated to the County of Los Angeles or an accredited repository such as the Natural

History Museum of Los Angeles County. Materials including isolates that do not meet those criteria may be offered to the Sierra Madre Historical Preservation Society or local school district for educational use.

Future development on the opportunity sites would be required to comply with the CUL-1, which would avoid impacts to Tribal Cultural Resources by monitoring construction activity, recording any potential archaeological resources if found, and data recovery. Therefore, impacts related to Tribal Cultural Resources would be less than significant with mitigation incorporated.

4. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Similar to the findings of the 2015 General Plan EIR, all impacts will be reduced to less-than significant levels. No additional mitigation measures are necessary.

Citywide cumulative impacts related to cultural resources would be less than significant.

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IV. ENVIRONMENTAL IMPACT ANALYSIS
E. GEOLOGY AND SOILS

1. INTRODUCTION

This section of the SEIR analyzes the potential environmental effects related to geology and soils, including paleontological resources, from implementation of the proposed project.

A. 2015 General Plan EIR Analysis and Conclusions

The General Plan EIR determined that implementation of the 2015 General Plan Update would not subject people or structures to substantial hazards from surface rupture of a known active fault or strong ground shaking. No Alquist-Priolo Earthquake Fault Zones have been designated in the City. In addition, although future development that would be accommodated by the General Plan would increase the number of residential units, nonresidential structures, residents, and workers in the City and strong ground shaking is very likely to occur during the design lifetime of such development, state and local regulations protect human-occupied structures from geoseismic hazards. Such regulations include the California Code of Regulations (CRC), Title 24, Parts 2 and 2.5; the California Building Code (CBC) (adopted by reference in Chapter 15.04 [Building Code and Permits] of the City's Municipal Code) and CRC (adopted by reference in Chapter 15.06 [California Residential Code] of the City's Municipal Code) contain provisions to safeguard against major structural failures or loss of life caused by earthquakes or other geologic hazards. Furthermore, the 2015 General Plan Update and Implementation Program include policies and implementation measures that would help reduce seismic-related impacts on future developments that would be accommodated under the 2015 General Plan Update. As such, the General Plan EIR found that potential impacts related to fault rupture and ground shaking would not be significant.

The General Plan EIR determined that implementation of the 2015 General Plan Update would not subject people or structures to substantial hazards from liquefaction. No changes in land use designations within a liquefaction zone were proposed by the 2015 General Plan Update and none of the development sites identified by the 2015 General Plan Update were located within a liquefaction zone. As such, the General Plan EIR found that implementation of the 2015 General Plan Update would not result in significant impacts related to liquefaction.

The General Plan EIR determined that implementation of the 2015 General Plan Update would not subject people or structures to substantial hazards from landslides. Changes in land uses designations proposed by the 2015 General Plan Update within areas designated as potentially susceptible to landslides would either change residential designations to nonresidential designations or would change residential designations to other residential designations with no increase in permitted density. In addition, the provisions of Chapter 17.52 (Hillside Management Zone) of the City's Municipal Code would protect the City's hillside areas from hazards such as landslides and the 2015 General Plan Update and Implementation Program include policies and implementation measures that would help reduce impacts associated with landslides. As such, the General Plan EIR found that significant impacts related to landslides would not occur.

The General Plan EIR determined that implementation of the 2015 General Plan Update would not result in substantial erosion. Future development that would be accommodated by the 2015 General Plan Update would be subject to local and state codes and requirements for erosion control and grading during construction, including South Coast Air Quality Management District Rules 402, which requires dust suppression, and 403, which fugitive dust control. In addition, future development projects would be

subject to National Pollution Discharge Elimination System (NPDES) permitting regulations, including the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) for each development project to reduce, prevent, or minimize soil erosion. Furthermore, the General Plan Update contains policies designed to minimize impacts related to erosion. As such, the General Plan EIR found that significant impacts related to erosion would not occur.

The General Plan EIR determined that future development in accordance with the 2015 General Plan Update would not expose people or structures to substantial hazard from collapsible soils, ground subsidence, or expansive soils. Ground Subsidence and expansive soils are not threats to people or structures within the City and individual development projects would be required to adhere to existing building and grading codes to minimize hazards from unstable soils. For example, Chapter 15.04 (Building Code and Permits) of the City's Municipal Code establishes rules and regulations to control excavation, grading, and earthwork construction (including fills). Additionally, as standard procedure by the City, grading and soil compaction requires the preparation of site-specific grading plans (per Chapter 15.48 [Excavations and Grading] of the City's Municipal Code), soils and geotechnical reports (which must address potential soil stability hazards), and hydrology studies, which are required to be submitted to and reviewed and approved by the City prior to the commencement of any grading activities. Therefore, the General Plan EIR found that hazards arising from unstable soils would not occur.

The General Plan EIR determined that future development in accordance with the 2015 General Plan Update could result in an impact on previously undiscovered paleontological resources within the City.[1] No paleontological resources or sites are known to existing within the City and the City is highly developed. Furthermore, paleontological sites are protected by a wide variety of state policies and regulations which require review of specific development project sites for identification of the potential for paleontological resources to occur as well as protection of such resources should they be encountered by development activities. However, development activities that require more extensive soil excavation than has previously occurred could potentially disturb paleontological resources. Therefore, impacts to paleontological resources were determined to be potentially significant.

2. ENVIRONMENTAL SETTING

A. Existing Conditions

1) *Regional Setting*

California is divided into geomorphic provinces, which are distinctive, generally easy-to-recognize natural regions in which the geologic record, types of landforms, pattern of landscape features, and climate are similar. The City is within the boundaries of two geomorphic provinces. The southern urbanized area is within the Peninsular Ranges Geomorphic Province and the northern foothill area is within the Transverse Ranges Geomorphic Province.

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[1] *The General Plan EIR's evaluation of potential impacts to paleontological resources was included in Chapter 5.4, Cultural Resources, however, pursuant to revisions to the CEQA Checklist that became effective on December 28, 2018, paleontological impacts are now evaluated as part of the Geology and Soils Checklist Questions and, therefore, the discussion of paleontological resources has been moved to Section V.E, Geology and Soils, of this Draft SEIR.*

The Peninsular Ranges Geomorphic Province is a series of mountain ranges separated by northwest-trending valleys, which characterizes the southwest portion of California. The trend of topography in this province is similar to the Coast Ranges, but the geology is more like the Sierra Nevada, with granitic rock intruding the older metamorphic rocks. Regional faults within the Peninsular Ranges province are oriented southeast to northwest. The Peninsular Ranges extend from lower California to the Mexican border and are bounded on the east by the Colorado Desert, on the north by the Transverse Ranges, on the west by the Pacific Ocean, and on the south by the Mexican peninsula of lower Baja California. The chief Peninsular Ranges are the Santa Ana, San Jacinto, and Santa Rosa. In the north is the low basin that includes Los Angeles.

The Transverse Ranges Geomorphic Province is an east-west trending series of steep mountain ranges and valleys; mountain ranges within this province include the San Gabriel, Verdugo, and Tehachapi Mountains. The east-west structure of the Transverse Ranges is oblique to the normal northwest trend of coastal California, hence the name "Transverse." The Transverse Ranges are bounded on the east by the San Bernardino Mountains, on the north by the Coast Ranges, on the west by the Pacific Ocean, and on the south by the Peninsular Ranges. The Sierra Madre Fault Zone forms the range's southern boundary. The province also extends offshore to include San Miguel, Santa Rosa, and Santa Cruz islands.

2) *Local Setting*

Sierra Madre is on the alluvial plain in the northwestern portion of the San Gabriel Valley. An alluvial plain is a deposit of sediment that gathers over time as it is deposited by a river or stream. The City's topography is characterized by broad, gentle foothill slopes within the southern portions of the City and steep hillsides and ridgeline-canyon terrain in the northern portions adjacent to the San Gabriel Mountains of the Angeles National Forest. The northern portion of the City is in an area where the alluvial plain meets the southern foothills of the San Gabriel Mountains. The majority of Sierra Madre's urban development is located within the gentler sloping foothill areas of the City. Elevations in the City range from a high of 1500 feet to a low of 600 feet. The terrain of the central and southern parts of the City is gently sloping with a consistent south slope of 7.5 percent.

3) *Geological Units*

The geologic units within the City are of two distinct types. The southern portion of the City consists of Pleistocene deposits – that is, deposits aged between 12,000 and 1.8 million years. Geologic units mapped in the southern portion of the City include alluvial fan deposits, which are derived from the San Gabriel Mountains to the north. A majority of the developed areas within the City have been built atop these soils. Much of the alluvial sediment in the central and southern sections of Sierra Madre is mapped as Quaternary young alluvial fan deposits (map symbols Qyf and Qyf_1) consisting of gravel, sand, and silt, that are bouldery near mountain fronts (USGS 2005). The hillsides in the northern portion of the City, however, are characterized by Mesozoic plutonic rocks – that is, igneous rocks and associated metamorphic rocks that formed at great depth; the Mesozoic era extends from approximately 250-65 million years ago (CGS 2013). These rocks are typically very hard and exhibit high amounts of fracturing in areas close to active faults.

4) *Faulting and Seismic Hazards*

Southern California has many earthquakes because it straddles the boundary between the North American and Pacific tectonic plates, and fault rupture often results from their motion. There are many active and potentially active faults within or in the vicinity of the City, including the Sierra Madre Fault, Clamshell-Sawpit Fault, and Raymond Fault. The nearest active fault is the Sierra Madre Fault, which

passes through the northern part of the City along the base of the San Gabriel Mountains in a west-northwesterly direction. This fault consists of several sub parallel branches found at the base of the mountains and within the one-quarter mile of slope above the mountain base.

Although the Sierra Madre, Clamshell-Sawpit and Raymond Faults are the primary faults that pose a hazard to the City, earthquakes occurring on other regional faults could also cause considerable damage. Other notable faults in the region include the San Andreas, Newport-Inglewood, Palos Verdes, Whittier, and Malibu Coast Faults, all of which are considered to be active. An earthquake along any of these faults would represent a hazard in the region, potentially causing many deaths and injuries, along with extensive property damage.

No Alquist-Priolo Earthquake Fault Zones are designated in the City; however, the map covering the City showing Alquist-Priolo Earthquake Fault Zones was prepared in 1977, and many known active faults have not yet been designated Alquist-Priolo Earthquake Fault Zones. For example, an active fault in proximity to the City is the Raymond Fault located approximately 1.5 miles south of the City. The Raymond Fault is designated an Alquist-Priolo Earthquake Fault Zone by CGS in their Publication of the Preliminary Review Alquist-Priolo Earthquake Fault Zone Map for the Mt. Wilson quadrangle, which includes Sierra Madre.

Ground Shaking

Earthquakes are caused by the violent and abrupt release of strain built up along faults. When a fault ruptures, energy spreads in the form of seismic waves. Hazards associated with seismic waves include ground rupture, ground shaking, land sliding, flooding, liquefaction, tsunamis, and seiches. Seismic hazards that could affect Sierra Madre include ground rupture and shaking, landslides, and liquefaction. The City has one liquefaction zone. Of these hazards, ground shaking presents the most significant risk in terms of potential structural damage and loss of life. Intensity of ground shaking and the resultant damages are determined by the magnitude of the earthquake, the distance from the epicenter, and characteristics of surface geology.

Since seismologists started recording and measuring earthquakes, there have been tens of thousands of recorded earthquakes in southern California, most with a magnitude below three. **Table V.E-1, Southern California Region Earthquakes with a Magnitude 5.0 or Greater**, lists the historical earthquake events that have affected southern California, including Sierra Madre, from 1769 to the present.

The peak ground acceleration estimated to occur in an earthquake with 10 percent chance of exceedance in 50 years in firm rock conditions in the San Gabriel Mountains (approximately 1.4 miles north of Sierra Madre) ranges between 0.76 and 0.79g, where g is the acceleration of gravity. The estimated peak ground acceleration in the same strength earthquake in alluvial conditions approximately 0.6 miles south of Sierra Madre is 0.70g.

Ground acceleration of 0.70 g to 0.79 g correlates with intensity IX on the Modified Mercalli Intensity (MMI) Scale, a subjective scale of how earthquakes are felt by people and the effects of earthquakes on buildings. The MMI Scale is a 12-point scale where Intensity I earthquakes are generally not felt by people; in Intensity XII earthquakes damage is total, and objects are thrown into the air. In an intensity IX earthquake, damage is considerable in specially designed structures, and well-designed frame structures are thrown out of plumb. Damage is great in substantial buildings, with partial collapse, and buildings are shifted off foundations.

Table V.E-1
Southern California Region Earthquakes with a Magnitude 5.0 or Greater

1769 Los Angeles Basin	1937 San Jacinto Fault (Terwilliger Valley)
1800 San Diego Region	1940 Imperial Valley
1812 Wrightwood	1942 Fish Creek
1812 Santa Barbara Channel	1948 Desert Hot Springs
1827 Los Angeles Region	1952 Kern County
1855 Los Angeles Region	1954 W. of Wheeler Ridge
1857 Great Fort Tejon	1954 San Jacinto Fault
1858 San Bernardino Region	1968 Borrego Mountain
1892 San Jacinto or Elsinore Fault	1971 San Fernando/Sylmar
1893 Pico Canyon	1980 White Wash
1894 Lytle Creek Region	1986 North Palm Springs
1894 E. of San Diego	Sites 1987 Whittier Narrows
1899 Lytle Creek Region	1987 Elmore Ranch
1899 San Jacinto	1987 Superstition Hills
1899 Hemet	1988 Pasadena
1907 San Bernardino Region	1990 Upland
1910 Glen Ivy Hot Springs	1991 Sierra Madre
1910 Elsinore	1992 Landers
1916 Tejon Pass Region	1992 Joshua Tree
1918 San Jacinto	1992 Big Bear
1923 San Bernardino Region	1994 Northridge
1925 Santa Barbara	1999 Hector Mine
1941 Carpinteria	2003 Paso Robles
1933 Long Beach	2008 Chino Hills

Sources: Sierra Madre 2008; SCEDC 2011

Liquefaction

Liquefaction refers to loose, saturated sand or silt deposits that behave as a liquid and lose their load-supporting capability when strongly shaken. Loose granular soils and silts that are saturated by relatively shallow groundwater are susceptible to liquefaction. The City has one liquefaction hazard zone, in and near Little Santa Anita Canyon in the northeastern part of the City.

Landslides

Landslides are another natural disaster risk relevant to the southern foothills of the San Gabriel Mountains that lie within the northern boundary of Sierra Madre. Landslides can occur for various reasons. For example, severe flooding can undermine the integrity of the soils in the hillsides, therefore causing instability. Landslides may also occur as the result of brush fires, which weaken the soil by removing vegetation integral to its support structure. Earthquakes can easily start a landslide of already unstable earth mass. Grading activities can also trigger landslides.

Landslides in the city typically occur at elevations of between 1,400 and 2,000 feet, well above the urban area of the city. A common type of landslide experienced in Sierra Madre is known as a mudflow. This type of landslide involves very rapid downslope movement of saturated soil, sub-soil and weathered bedrock. Large mudflows may have enough force to uproot trees and to carry along boulders several feet

in diameter. Due to their speed, mudflows can be very destructive, especially along the bottom and the mouths of canyons. Mudflows have occurred in several locations in the northern foothill areas of the city.

Historically, two major landslides have occurred in the northern hillside areas of Sierra Madre. In January 1954, 2,000 residents were urged to evacuate due to major landslide activity in the city's hillside areas and the damage was extensive. In March 1994, a cloudburst below Mount Wilson caused a flash flood and mudslide in Bailey Canyon. The mudslide claimed the lives of two hikers, both Sierra Madre residents.

Geologic Hazards

Collapsible Soils

When collapsible soils become saturated, their grains rearrange and lose cohesion, causing rapid, substantial settlement under relatively light loads. Soils prone to collapse are generally young, deposited by flash floods or wind. Increased surface water infiltration, such as from irrigation or a rise in the groundwater table, combined with the weight of a building can cause rapid settlement and cracking of foundations and walls. Certain areas of the city – generally, areas of wash deposits in Santa Anita and Little Santa Anita canyons could be susceptible to collapsible soils.

Ground Subsidence

The major cause of ground subsidence is withdrawal of groundwater. The City of Sierra Madre Natural Hazard Mitigation Plan estimated population at risk and economic losses from several types of natural hazards using the HAZUS software developed by the Federal Emergency Management Agency (FEMA). As stated in the Natural Hazard Mitigation Plan, no persons in Sierra Madre were estimated to be at risk from land subsidence.

Expansive Soils

Expansive soils shrink or swell as the moisture content decreases or increases; the shrinking or swelling can shift, crack, or break structures built on such soils. As stated in the Natural Hazard Mitigation Plan, expansive soils are not a threat to the City.

Erosion

Erosion is the movement of rock and soil due to water, wind, and gravity. Soil erosion may be a slow process that continues relatively unnoticed, or it may occur quickly, causing serious loss of topsoil. The rate and magnitude of soil erosion by water is controlled by rainfall intensity and runoff, soil texture and cohesion, slope gradient and length, and vegetation cover. Certain areas of the city, such as the hillside areas, could be susceptible to erosion. Additionally, grading activities temporarily increases the potential for erosion by removing protective vegetation, changing natural drainage patterns, and constructing slopes.

Paleontological Resources

Per the 1996 Sierra Madre General Plan Update EIR, no paleontological resources or sites have been identified in the City.

5) *Housing Element Project Sites*

Sites 1-4 and A-D are all located on the hillside areas of the City, which consists of Pleistocene deposits aged between 12,000 and 1.8 million years. Geologic units mapped in the southern portion of the City include alluvial fan deposits derived from the San Gabriel Mountains to the north. Much of the alluvial

sediment in the central and southern sections of Sierra Madre is mapped as Quaternary young alluvial fan deposits (map symbols Qyf and Qyf1) consisting of gravel, sand, and silt.

No Alquist-Priolo Earthquake Fault Zones are designated in the City; therefore, Sites 1-4 and A-D are not located in Alquist-Priolo Earthquake Fault Zones. The nearest active fault to the opportunity sites is the Sierra Madre Fault, which passes through the northern part of the City along the base of the San Gabriel Mountains in a west-northwesterly direction. Although the Sierra Madre, Clamshell-Sawpit and Raymond Faults are the primary faults that pose a hazard to the City, earthquakes occurring on other regional faults could also cause considerable damage.

Sites 1-4 and A-D are not located on or near liquefaction hazard zones. The opportunity sites are not located adjacent to hilly areas and would not be subject to land sliding. As stated in the Natural Hazard Mitigation Plan, no areas of the City are at risk from land subsidence, expansive soils are not a risk in the City, and the only collapsible soils are located in wash deposits in the canyon areas of the City. Lastly, no paleontological resources or sites have been identified in the City.

B. Regulatory Setting

1) *State*

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act (California Public Resources Code Sections 2621 et seq.), administered by the California Geologic Survey (CGS), was passed in 1972 to mitigate the hazard of surface faulting to structures for human occupancy. The main purpose of the act is to prevent the construction of buildings used for human occupancy on the surface trace of state-designated active faults. The law requires the State Geologist to establish regulatory zones (known as Earthquake Fault Zones or Special Studies Zone) around the surface traces of active faults and to issue maps of such zones. Local agencies must regulate most development projects within the established regulatory zones. 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. If an active fault is found, a structure for human occupancy cannot be placed over the trace of the fault, and is not allowed within 50 feet of the trace of an active fault.

Natural Hazards Disclosure Act

The Natural Hazards Disclosure Act 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.

California Building and Residential Codes

The state regulations protecting human-occupied structures from geoseismic hazards are provided in the most recent (2013) California Building Code (CBC; California Code of Regulations, Title 24, Part 2) and California Residential Code (CRC; California Code of Regulations, Title 24, Part 2.5). Cities and counties were required to enforce the regulations of the CBC and CRC beginning January 1, 2014. The CBC (adopted by reference in Chapter 15.04 [Building Code and Permits] of the City's Municipal Code) and CRC (adopted by reference in Chapter 15.06 [California Residential Code] of the City's Municipal Code) contain provisions to safeguard against major structural failures or loss of life caused by earthquakes or other geologic hazards. For example, the CBC contains provisions for earthquake safety based on factors

including occupancy type, the types of soil and rock onsite, and the strength of ground motion with specified probability of occurring at the site.

Additionally, requirements for geotechnical investigations are included in Appendix J Section J104 of the CBC; additional requirements for subdivisions requiring tentative and final maps and for other specified types of structures are contained in California Health and Safety Code Sections 17953 to 17955 and in Section 1802 of the CBC. Testing of samples from subsurface investigations is required, such as from borings or test pits. Studies must be done as needed to evaluate slope stability, soil strength, position and adequacy of load-bearing soils, the effect of moisture variation on load-bearing capacity, compressibility, liquefaction, differential settlement, and expansiveness.

California Public Resources Code

Paleontological sites are protected pursuant to a wide variety of state policies and regulations enumerated under the California Public Resources Code. In addition, paleontological resources are recognized as a non-renewable resource and therefore receive protection under the California Public Resources Code and CEQA.

2) *Local*

City of Sierra Madre Municipal Code

The City's Municipal Code has existing standards and regulations that mitigate potential seismic and geologic safety concerns related to new construction. The following is a description of the provisions of the City's Municipal Code that are applicable to the General Plan Update.

- **Chapter 15.04 (Building Code and Permits).** This chapter adopts by reference the most recent (2013) California Building Code, with certain amendments.
- **Chapter 15.06 (California Residential Code).** This chapter adopts by reference the most recent (2013) California Residential Code, with certain amendments.
- **Chapter 15.48 (Excavations and Grading).** The purpose of this chapter is to safeguard life, limb, property, and public welfare by establishing minimum requirements for regulating grading and procedures by which these requirements may be enforced. It outlines the requirement for projects that required a grading permit.

City of Sierra Madre Natural Hazard Mitigation Plan

The City of Sierra Madre Natural Hazard Mitigation Plan was adopted by the Sierra Madre City Council in 2008; and updated and adopted again in 2021. Local jurisdictions are required to adopt a state-approved Multi-Hazard Mitigation Plan per the federal Disaster Mitigation Act of 2000 (Public Law 106-390).) The Natural Hazard Mitigation Plan was adopted in order to facilitate timely and orderly responses in disaster situations, including earthquakes and landslides. It includes resources and information to assist city residents, public and private sector organizations, and others interested in participating in planning for natural hazards. The Natural Hazard Mitigation Plan provides a list of action items that may assist the city in reducing risk and preventing loss from future natural hazard events.

City of Sierra Madre 2015 General Plan

The following are relevant policies and implementation measures of the Sierra Madre General Plan and Implementation Program.

General Plan Policies

Land Use Element

- Policy L9.4: Provide incentives to rebuild damaged or demolished structures to pre-existing dimensions but in conformance with the City's building code. Incentives may include fee reductions, permit streamlining and other similar measures.
- Policy L15.1: In subdividing larger parcels, determine development density based on a calculation that uses slope as one of the primary factors, which means that the steeper the slope, the larger the minimum lot size.
- Policy L15.2: Ensure that development in the hillside areas be located in those areas resulting in the least environmental impact.
- Policy L15.3: Require that all access into hillside areas be designed for minimum disturbance to the natural features.
- Policy L16.1: Minimize the amount of grading and removal of natural vegetation.
- Policy L16.2: Require that home sites be planned, developed and designed to:
    - Eliminate fire hazards.
    - Prevent land instability.
    - Prevent exposure to geological and geotechnical hazards.
    - Provide adequate drainage controls to prevent flooding and landslides.
    - Prevent any other hazard or threat to the public health, safety, and welfare.
    - Use the minimum amount of water possible for landscaping and interior uses.
- Policy L17.2: Require that all development be designed to reflect the contours of the existing landform using techniques such as split pads, detached secondary structures (such as garages), and avoiding the use of excessive cantilevers.
- Policy L17.3: Require that all development preserves, to the maximum extent possible, significant features of the natural topography, including swales, canyons, knolls, ridge lines, and rock outcrops.
- Policy L32.1: Allow the reconstruction of existing non-conforming structures which must be replaced due to deterioration or hazard (fire and earthquake).

Resource Management Element

- Policy R1.1: Maintain and enforce the Hillside Management Zone Ordinance and other ordinances that seek to protect hillside areas.

Hazard Prevention Element

- Policy Hz6.3: Improve knowledge of landslide hazard areas and understanding of vulnerability and risk to life and property in hazard-prone areas.
- Policy Hz10.1: Require that earthquake survival and efficient post-disaster functioning be a primary concern in the siting, design and construction standards for essential facilities in Sierra Madre.
- Policy Hz10.2: Investigate the limitations on the location of new or altered residences and critical, sensitive and high occupancy facilities in areas near active faults, and consider conducting a comprehensive geologic investigation to show where active faults pose a hazard to structures.
- Policy Hz10.3: Investigate requiring that proposed new or altered residences and critical, sensitive, and high occupancy facilities located in areas near active faults are not approved unless necessary subsurface fault investigations have first been completed.
- Policy Hz10.4: Investigate requiring a thorough subsurface fault investigation be conducted for any proposed habitable structure on private property in close proximity of an active fault zone, and monitor any trenching for public buried water lines in the same area. Assign a City employee the duty of collecting and assessing of data gathered from the above listed efforts with help of a registered geologist.
- Policy Hz10.5: Create a central depository of all Sierra Madre geologic information the City obtains through any project approvals process, including any governmental projects.
- Policy Hz11.1: Promote public awareness of the need to upgrade seismically hazardous buildings for the protection of health and safety in the city.
- Policy Hz11.2: Encourage seismic review of buildings.
- Policy Hz11.3: Promote seismic upgrading of older residential and commercial structures with special attention given to historic structures.
- Policy Hz12.1: Maintain and update multi-hazard emergency preparedness plan for the City that includes seismic safety.
- Policy Hz12.2: Maintain and upgrade the City's disaster response plans at least annually, conduct periodic tests of their practicality and effectiveness, and involve residents and business in the preparation and testing of the plans.
- Policy Hz12.3: Prepare and disseminate to residents and businesses information regarding seismic risks affecting the city, measures to protect life and property before and during an earthquake, and emergency procedures to follow after an earthquake.
- Policy Hz12.4: Incorporate planning for potential incidents affecting critical, sensitive and high-occupancy facilities into the City's contingency plans for disaster response and recovery.

- Policy Hz12.5: Ensure that emergency preparedness is the mutual responsibility of City agencies, city residents and the business community.
- Policy Hz12.6: Develop and implement ongoing city-wide programs for disaster preparedness and recovery planning.
- Policy Hz13.1: Provide residents and business owners with a continuing awareness and expanding knowledge of the seismic hazards affecting the city.
- Policy Hz13.2: Adopt and maintain high standards for seismic performance of buildings, through prompt adoption and careful enforcement of the best available standards for seismic design.
- Policy Hz 13.3 Adopt a wood soft first-story ordinance and program to retrofit potentially vulnerable buildings.
- Policy Hz 13.4 Utilize contemporary seismic maps during plan/permit review process.
- Policy Hz 13.5 Incorporate the Regional Earthquake Transportation Evacuation Route updated developed by the Area D Disaster Management Area Coordinators into the Emergency Operations Plan.
- Policy Hz 13.6 Identify funding sources for structural and non-structural retrofitting of City-owned structures that are seismically vulnerable (e.g. City Library).
- Policy Hz 13.7 Encourage purchase of earthquake hazard insurance for private properties and uninsured City-owned properties.
- Policy Hz 13.8 Encourage hazard reduction with non- structural and structural earthquake retrofits and other strategies in homes, businesses, and City facilities.
- Policy Hz 13.9 Replace water mains in fault zones with seismic pipe thereby maintaining water system integrity and reducing the threat to life and properly loss by providing fire suppression.
- Policy Hz 13.10 Renovate main booster plant with new booster pumps and control panels thereby ensuring reliable water delivery to City's distribution system.
- Policy Hz 13.11 Seismically retrofit the Auburn reservoir; thereby preserving stored water for domestic use and fire suppression.

Community Services Element

- Policy C32.2: Maintain a disaster plan that provides emergency information on government access television in the event of a disaster.

<u>Implementation Program Measures</u>

Hillside Preservation Implementation Program

- Measure IM-1: The City shall continue to enforce the Hillside Zone Ordinance and other ordinances that seek to protect the hillside areas.

Flood/Landslide Implementation Program

- Measure IM-2: The City shall amend the Grading, Hillside Management Zone, Low Impact Development, and/or Water Efficient Landscape ordinances to limit the amount of impermeable area that can be constructed as a part of any development project.

Seismic Safety Implementation Program

- Measure IM-1: The City shall consider earthquake safety and post-disaster functioning when siting, designing and constructing essential facilities in Sierra Madre.
- Measure IM-2: The City will consider engaging the services of a geological consultant to identify areas in the city where active faults pose a hazard to structures, and to assess the need for limitations on the location of new or altered structures near active faults and subsurface investigations prior to project approval.
- Measure IM-3: The City shall keep on file any geologic information obtained through project approvals for future reference.
- Measure IM-4: The City shall make information available to residents, property owners and emergency responders regarding seismic upgrade of buildings, including historic structures.
- Measure IM-5: The City shall collect and undertake a review of buildings that are unreinforced masonry (URM) and soft first-stories.
- Measure IM-6: The City shall continue to maintain and update the multi-hazard emergency preparedness plan for the city, and improve emergency coordination between the City's internal departments, outside agencies, and city residents and business.
- Measure IM-7: The City shall continue to enforce the Building Code and adopt any updates to seismic requirements in a timely manner.

3. ENVIRONMENTAL IMPACTS AND MITIGATIONS

A. Threshold of Significance

Appendix G of the CEQA Guidelines provides thresholds address impacts related to geology and soils, including paleontological resources. Specifically, the Guidelines state that the proposed project may have an adverse significant geology and soils impact if it would:

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
   i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issues 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),
   ii. Strong seismic ground shaking,
   iii. Seismic-related ground failure, including liquefaction, or
   iv. 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 soils, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property;

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 water; or

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

B. Project Impacts and Mitigation Measures

Impact E-1: Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issues 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),

ii. Strong seismic ground shaking,

iii. Seismic-related ground failure, including liquefaction, or

iv. Landslides?

Impact Analysis:

The 2015 General Plan EIR determined that implementation of the 2015 General Plan Update would not subject people or structures to substantial hazards from surface rupture of a known active fault or strong ground shaking. Although future development that would be accommodated by the General Plan would increase the number of residential units, nonresidential structures, residents, and workers in the City and strong ground shaking is very likely to occur during the design lifetime of such development, state and local regulations protect human-occupied structures from geoseismic hazards. The 2015 General Plan EIR determined that implementation of the 2015 General Plan Update would not subject people or structures to substantial hazards from liquefaction. As such, the 2015 General Plan EIR found that potential impacts related to fault rupture and ground shaking would not be significant.

No Alquist-Priolo Earthquake Fault Zones are designated in the City; therefore, Sites 1-4 and A-D are not located in Alquist-Priolo Earthquake Fault Zones. The nearest active fault to the opportunity sites is the Sierra Madre Fault, which passes through the northern part of the City along the base of the San Gabriel Mountains in a west-northwesterly direction. The Sierra Madre, Clamshell-Sawpit and Raymond Faults are the primary faults that pose a hazard to the City. Additionally, earthquakes occurring on other regional faults could also cause considerable damage. However, this risk is not unique to Sites 1-4 and A-D as seismic shaking is a risk throughout southern California, and these sites in the City are not at greater risk of seismic activity or impacts than other areas. Additionally, state and local jurisdictions regulate development in California through a variety of tools that reduce hazards from earthquakes and other geologic hazards.

Sites 1-4 and A-D are not located on or near liquefaction hazard zones. Lastly, the opportunity sites are not located adjacent to hilly areas and would not be subject to landsliding as the sites are located on level land. The update to the Safety Element includes policies related to limiting risk from wildfire, including avoiding development in Very High Fire Severity Zones, updating maps related to fire hazards, and developing a Vegetation Management Program. These policies do not propose any development that

would be subject to strong seismic shaking, or seismic-related ground failure, liquefaction or landslide. The update to the Circulation Element updates policies related to transportation analysis thresholds and does not include any policies with the potential to result in the risk from strong seismic shaking, liquefaction, or landslides.

Similar to the 2015 General Plan EIR findings, direct or indirect risk of liquefaction or land sliding from strong seismic ground shaking would not result in significant impacts.

Mitigation Measures:

None required.

Impact E-2: Would the project result in substantial soil erosion or the loss of topsoil?

Impact Analysis:

The 2015 General Plan EIR determined that implementation of the 2015 General Plan Update would not result in substantial erosion. Future development that would be accommodated by the 2015 General Plan Update would be subject to local and state codes and requirements for erosion control and grading during construction, including South Coast Air Quality Management District Rules 402, which requires dust suppression, and 403, which fugitive dust control. In addition, future development projects would be subject to National Pollution Discharge Elimination System (NPDES) permitting regulations, including the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) for each development project to reduce, prevent, or minimize soil erosion. Furthermore, the General Plan Update contains policies designed to minimize impacts related to erosion. As such, the 2015 General Plan EIR found that significant impacts related to erosion would not occur.

Sites 1-4 are currently developed with structures and Sites A-D are fully paved. All sites have been developed previously and the soil has been disturbed. However, redevelopment on the sites would require grading and excavation, which has the potential to create erosion on the sites. Future development that would be accommodated by the General Plan Update would be subject to local and state codes and requirements for erosion control and grading during construction. The General Plan includes policies to minimize impacts related to erosion. Additionally, depending on the size of the opportunity site, construction activities on the opportunity sites may be required to obtain a Construction General Permit (CGP) or National Pollution Discharge Elimination System (NPDES) permitting regulations that would regulate construction activities to minimize water pollution, including sediment and require the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) for construction.

The update to the Land Use Element includes establishing two new multi-family residential land use categories (R-3-20 and R-3-30), creating an Affordable Housing Overlay on select congregational sites, along with minor changes to the Land Use table and map to accommodate residential land uses on the sites identified to meet the RHNA allocation. The land use designation changes and rezoning would allow development on Sites 1-4 and A-D, which could result in impacts from erosion; however, construction on the sites would be subject to local and state codes to reduce erosion.

The update to the Safety Element includes policies related to limiting risk from wildfire, including avoiding development in Very High Fire Severity Zones, updating maps related to fire hazards, and developing a Vegetation Management Program. These policies are limited in their potential to create ground disturbance that would create erosion. The update to the Circulation Element updates policies related to

transportation analysis thresholds and does not include any policies with the potential to result in erosion or loss of topsoil.

Similar to the 2015 General Plan EIR findings, development on Sites 1-4 and A-D would not result in impacts from erosion or loss of topsoil and this impact would be less than significant.

Mitigation Measures:

None required.

Impact E-3: Would the project 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?

Impact Analysis:

The 2015 General Plan EIR found that certain areas of the City (generally, areas of wash deposits in Santa Anita and Little Santa Anita canyons) are subject to collapsible soils; however, individual development projects would be required to adhere to existing building and grading codes, which would ensure that risks arising from unstable soils would not occur. The 2015 General Plan EIR determined that implementation of the 2015 General Plan Update would not subject people or structures to substantial hazards from liquefaction. No changes in land use designations within a liquefaction zone were proposed by the 2015 General Plan Update and none of the development sites identified by the 2015 General Plan Update were located within a liquefaction zone. As such, the 2015 General Plan EIR found that implementation of the 2015 General Plan Update would not result in significant impacts related to liquefaction.

The 2015 General Plan EIR determined that implementation of the 2015 General Plan Update would not subject people or structures to substantial hazards from landslides. Changes in land uses designations proposed by the 2015 General Plan Update within areas designated as potentially susceptible to landslides would either change residential designations to nonresidential designations or would change residential designations to other residential designations with no increase in permitted density. In addition, the provisions of Chapter 17.52 (Hillside Management Zone) of the City's Municipal Code would protect the City's hillside areas from hazards such as landslides and the 2015 General Plan Update and Implementation Program include policies and implementation measures that would help reduce impacts associated with landslides. As such, the 2015 General Plan EIR found that significant impacts related to landslides would not occur.

As stated in the City's Hazard Mitigation Plan, no areas of the City are at risk from land subsidence, expansive soils are not a risk in the City, and the only collapsible soils are located in wash deposits in the canyon areas of the City (Santa Anita and Little Santa Anita Canyons). Sites 1-4 and A-D are not located on or near liquefaction hazard zones. Additionally, Sites 1-4 and A-D are not located adjacent to hilly areas and would not be subject to land sliding.

The update to the Land Use Element includes establishing two new multi-family residential land use categories (R-3-20 and R-3-30), creating an Affordable Housing Overlay on select congregational sites, along with minor changes to the Land Use table and map to accommodate residential land uses on the sites identified to meet the RHNA allocation. The land use designation changes and rezoning would allow development on Sites 1-4 and A-D. However, Sites 1-4 and A-D are not located on areas subject to collapsible soils and any grading and soil compaction required for development on the sites would require the preparation of site-specific grading plans (per Chapter 15.48 [Excavations and Grading] of the City's

Municipal Code), soils and geotechnical reports (which must address potential soil stability hazards), and hydrology studies, which would be reviewed and approved by the City prior to the commencement of any grading activities. Submittal of these technical plans and studies would ensure that hazards arising from unstable soils would not occur, as they would be prepared in accordance with grading and engineering standards outlined in the most current CBC.

The update to the Safety Element includes policies related to limiting risk from wildfire, including avoiding development in Very High Fire Severity Zones, updating maps related to fire hazards, and developing a Vegetation Management Program. These policies are limited in their potential to create ground disturbance. The update to the Circulation Element updates policies related to transportation analysis thresholds and does not include any policies with the potential to result in construction that would be subject to collapsible soils.

Therefore, similar to the 2015 General Plan EIR findings, development on Sites 1-4 and A-D would not result in impacts from collapsible soils, resulting in landslides, lateral spreading, subsidence, and liquefaction and this impact would be less than significant.

Mitigation Measures:

None required.

Impact E-4: Would the project be located on expansive soils, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Impact Analysis:

The 2015 General Plan EIR determined that future development in accordance with the 2015 General Plan Update would not expose people or structures to substantial hazard from expansive soils. Therefore, expansive soils are not threats to people or structures within the City and individual development projects would be required to adhere to existing building and grading codes to minimize hazards from unstable soils. For example, Chapter 15.04 (Building Code and Permits) of the City's Municipal Code establishes rules and regulations to control excavation, grading, and earthwork construction (including fills). Additionally, as standard procedure by the City, grading and soil compaction requires the preparation of site-specific grading plans (per Chapter 15.48 [Excavations and Grading] of the City's Municipal Code), soils and geotechnical reports (which must address potential soil stability hazards), and hydrology studies, which are required to be submitted to and reviewed and approved by the City prior to the commencement of any grading activities. Therefore, the 2015 General Plan EIR found that hazards arising from expansive soils would not occur.

As stated in the 2015 General Plan EIR, expansive soils are not a risk in the City. Therefore, similar to the findings of the 2015 General Plan EIR, Sites 1-4 and A-D would not be located on areas of expansive soils and there would be no impact.

Mitigation Measures:

None required.

Impact E-5: Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of water?

Impact Analysis:

The 2015 General Plan EIR did not include an analysis of whether soils would be adequate to support the use of septic tanks as the City is development in the City is fully served by sewers and any new development would be required to be served by the City's sewer system.

Sites 1-4 and A-D would be located on sites currently served with the City's sewer system. Any new development on these sites would be served by the existing sewer system and would not be served by a septic tank or alternative wastewater disposal system. Therefore, there would be no impact.

Mitigation Measures:

None required.

Impact E-6: Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Impact Analysis:

The 2015 General Plan EIR determined that future development in accordance with the 2015 General Plan Update could result in an impact on previously undiscovered paleontological resources within the City.[2] No paleontological resources or sites are known to existing within the City and the City is highly developed. Furthermore, paleontological sites are protected by a wide variety of state policies and regulations which require review of specific development project sites for identification of the potential for paleontological resources to occur as well as protection of such resources should they be encountered by development activities. However, development activities that require more extensive soil excavation than has previously occurred could potentially disturb paleontological resources. Therefore, impacts to paleontological resources were determined to be potentially significant and mitigation was required.

Sites 1-4 and A-D are all located on the hillside areas of the City, which consists of Pleistocene deposits aged between 12,000 and 1.8 million years. Geologic units mapped in the southern portion of the City include alluvial fan deposits derived from the San Gabriel Mountains to the north. Much of the alluvial sediment in the central and southern sections of Sierra Madre is mapped as Quaternary young alluvial fan deposits (map symbols Qyf and Qyf1) consisting of gravel, sand, and silt. No paleontological resources or sites have been identified in the City and based on the location of Sites 1-4 and A-D it is unlikely that paleontological resources would be found on the site during any construction. However, development on Sites 1-4 and A-D would require grading and construction activities that could potentially cause the disturbance of unknown paleontological resources. Therefore, although highly unlikely, future development could potentially unearth previously unknown/unrecorded paleontological resources.

The update to the Land Use Element includes establishing two new multi-family residential land use categories (R-3-20 and R-3-30), creating an Affordable Housing Overlay on select congregational sites, along with minor changes to the Land Use table and map to accommodate residential land uses on the sites identified to meet the RHNA allocation. The land use designation changes and rezoning would allow

[2] *The General Plan EIR's evaluation of potential impacts to paleontological resources was included in Chapter 5.4, Cultural Resources, however, pursuant to revisions to the CEQA Checklist that became effective on December 28, 2018, paleontological impacts are now evaluated as part of the Geology and Soils Checklist Questions and, therefore, the discussion of paleontological resources has been moved to Section V.E, Geology and Soils, of this Draft SEIR.*

development on Sites 1-4 and A-D, which could result in impacts to previously unknown paleontological resources.

The update to the Safety Element includes policies related to limiting risk from wildfire, including avoiding development in Very High Fire Severity Zones, updating maps related to fire hazards, and developing a Vegetation Management Program. These policies are limited in their potential to create ground disturbance that would uncover previously unknown paleontological resources. The update to the Circulation Element updates policies related to transportation analysis thresholds and does not include any policies with the potential to result in the adverse changes in paleontological resources.

Mitigation Measures:

To ensure that impacts to paleontological resources remain less than significant, the 2015 General Plan Update EIR included the following measures (modified here for paleontological resources):

> **GEO-1: GP EIR MM 5.4-2.** In the event that paleontological resources (sites, features, artifacts, or fossilized remains) are exposed during construction activities, the City of Sierra Madre shall be notified immediately and all work shall cease within a 50-foot radius of the discovery. A qualified paleontologist shall determine whether additional study shall be warranted. Construction activity may continue unimpeded on other portions of the project site. Personnel of the project shall not collect or move any paleontological materials and associated materials. The found deposits shall be treated in accordance with Federal, State, and local guidelines, including those set forth in PRC Section 21083.2. Any significant fossils collected during project-related excavations shall be prepared to the point of identification and curated into an accredited repository with retrievable storage.
>
> The qualified paleontologist shall prepare a final monitoring and mitigation report for submittal to the City in order to document the results of the monitoring effort and any discoveries. If there are significant discoveries, fossil locality information and final disposition shall be included with the final report which shall be submitted to the appropriate repository and the City.

Future development on the opportunity sites would be required to comply with the GEO-1, which would avoid impacts to paleontological resources by recording any potential resources if found, and data recovery. Therefore, impacts related to paleontological **r**esources would be less than significant with mitigation incorporated.

4. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Similar to the findings of the 2015 General Plan EIR, all impacts will be reduced to less-than significant levels. No additional mitigation measures are necessary.

IV. ENVIRONMENTAL IMPACT ANALYSIS
F. GREENHOUSE GAS EMISSIONS AND ENERGY

1. INTRODUCTION

This section of the SEIR analyzes the potential environmental effects related to greenhouse gas (GHG) emissions and energy consumption from implementation of the proposed project. Analysis in this section is based on the Sierra Madre General Plan Housing Element Air Quality and Greenhouse Gas Impact Study prepared by MD Acoustics, LLC (July 2021) and the Sierra Madre General Plan Housing Element Update CEQA Energy Review (MD Acoustics, LLC 2021).

A. 2015 General Plan EIR Analysis and Conclusions

The General Plan EIR determined that implementation of the 2015 General Plan Update would result in a net decrease of GHG emissions compared to existing conditions and would not have a significant impact on the environment. 2015 General Plan Update buildout conditions includes GHG emissions reductions from federal and state measures identified in CARB's Scoping Plan, including the Pavely fuel efficiency standards, Low Carbon Fuel Standards (LCFS) for fuel use (transportation and off-road), and state reductions for non-transportation measures and it is likely that new federal and state programs would be adopted, resulting in further GHG reductions post-buildout. As a result of these regulations and turnover of California's on-road vehicle fleet, the GHG emissions from additional growth in the City would be offset by a reduction in existing emissions, resulting in an approximately 5 percent reduction of GHG emissions compared to existing conditions. Therefore, the General Plan EIR found that impacts from GHG emissions would not be significant.

The General Plan EIR determined that growth of the City under the 2015 General Plan Update would not be inconsistent with SCAG's 2012 Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS) or the City's Energy Action Plan. However, the General Plan EIR determined that growth would not meet the GHG emissions reduction targets of Executive Orders B-30-15 and S-03-05 without additional federal, state, and local GHG reduction measures and plans. Although buildout of the 2015 General Plan Update would result in less emissions than currently generated in the City, the overall goal in the state is to achieve an 80 percent reduction from 1990 levels by 2050, which the City would not meet. Therefore, the 2015 General Plan Update would conflict with Executive Orders B-30-15 and S-03-05 and impacts would be significant.

2. GREENHOUSE GAS - ENVIRONMENTAL SETTING

A. Global Climate Change

Global climate change refers to changes in average climatic conditions on Earth as a whole, including changes in temperature, wind patterns, precipitation, and severe weather events. Global warming, a related concept, is the observed increase in average temperature of Earth's surface and atmosphere. One identified cause of global warming is an increase of GHGs in the atmosphere. GHGs are those compounds in Earth's atmosphere that play a critical role in determining Earth's surface temperature.

The Earth's natural warming process is known as the "greenhouse effect." It is called the greenhouse effect because Earth and the atmosphere surrounding it are similar to a greenhouse with glass panes in that the glass allows solar radiation (sunlight) into Earth's atmosphere but prevents radiative heat from escaping, thus warming Earth's atmosphere. Some levels of GHGs keep the average surface temperature

of Earth close to a hospitable 60 degrees Fahrenheit. However, it is believed that excessive concentrations of anthropogenic GHGs in the atmosphere can result in increased global mean temperatures, with associated adverse climatic and ecological consequences.[1]

Scientists studying the particularly rapid rise in global temperatures have determined that human activity has resulted in increased emissions of GHGs, primarily from the burning of fossil fuels (from motorized transport, electricity generation, consumption of natural gas, industrial activity, manufacturing, etc.) deforestation, agricultural activity, and the decomposition of solid waste. Scientists refer to the global warming context of the past century as the "enhanced greenhouse effect" to distinguish it from the natural greenhouse effect.[2]

Global GHG emissions due to human activities have grown since pre-industrial times. As reported by the United States Environmental Protection Agency (USEPA), global carbon emissions from fossil fuels increased by over 16 times between 1900 and 2008 and by about 1.5 times between 1990 and 2008. In addition, in the Global Carbon Budget 2014 report, published in September 2014, atmospheric carbon dioxide (CO_2) concentrations in 2013 were found to be 43 percent above the concentration at the start of the Industrial Revolution, and the present concentration is the highest during at least the last 800,000 years.[3] Global increases in CO_2 concentration are due primarily to fossil fuel use, with land use change providing another significant but smaller contribution. With regard to emissions of non- CO_2-GHGs, these have also increase significantly since 1900.[4] In particular, studies have concluded that it is very likely that the observed increase in methane (CH_4) concentration is predominantly due to agriculture and fossil fuel use.[5]

In August 2007, international climate talks held under the auspices of the United Nations Framework Convention on Climate Change (UNFCCC) led to the official recognition by the participating nations that global emissions of GHG must be reduced. According to the "Ad Hoc Working Group on Further Commitments of Annex I Parties under the Kyoto Protocol," avoiding the most catastrophic events forecast by the United Nations Intergovernmental Panel on Climate Change (IPCC) would entail emissions reductions by industrialized countries in the range of 25 to 40 percent below 1990 levels. Because of the Kyoto Protocol's Clean Development Mechanism, which gives industrialized countries credit for financing emission-reducing projects in developing countries, such an emissions goal in industrialized countries could ultimately spur efforts to cut emissions in developing countries as well.[6]

With regard to the adverse effects of global warming, as reported by the Southern California Association of Governments (SCAG), "Global warming poses a serious threat to the economic well-being, public health

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1 *United States Environmental Protection Agency, 1/19/17 Snapshot, Climate Change: Basic Information, January 19, 2017.*

2 *Pew Center on Global Climate Change, Climate Change 101: Understanding and Responding to Global Climate Change, October 12, 2006.*

3 *C. Le Quéré, et al., Global Carbon 2014, Earth System Science Data, 2015, doi: 10.5194/essd—7—47—2015.*

4 *United States Environmental Protection Agency, Global Greenhouse Gas Emissions Data Website, accessed: August 7, 2020.*

5 *United States Environmental Protection Agency, Atmospheric Concentrations of Greenhouse Gas, updated June 2015.*

6 *United Nations Framework Convention on Climate Change, Press Release – Vienna UN Conference Shows Consensus on Key Building Blocks for Effective International Response to Climate Change, August 31, 2007.*

and natural environment in southern California and beyond. The potential adverse impacts of global warming include, among others, a reduction in the quantity and quality of water supply, a rise in sea level, damage to marine and other ecosystems, and an increase in the incidences of infectious diseases. Over the past few decades, energy intensity of the national and state economy has been declining due to the shift to a more service-oriented economy. California ranked fifth lowest among the states in CO2 emissions from fossil fuel consumption per unit of Gross State Product. However, in terms of total CO2 emissions, California is second only to Texas in the nation and is the 12th largest source of climate change emissions in the world, exceeding most nations. The SCAG region, with close to half of the state's population and economic activities, is also a major contributor to the global warming problem."[7]

B. GHG Background

GHGs include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3).[8] Carbon dioxide is the most abundant GHG. Other GHGs are less abundant, but have higher global warming potential than CO_2. Thus, emissions of other GHGs are frequently expressed in the equivalent mass of CO_2, denoted as CO_2e. Forest fires, decomposition, industrial processes, landfills, and consumption of fossil fuels for power generation, transportation, heating, and cooking are the primary sources of GHG emissions. A general description of the GHGs is provided in **Table IV.F-1, Description of Identifies GHGs**.

Table IV.F-1
Description of Identified Greenhouse Gases a

GHG	General Description
Carbon Dioxide (CO_2)	CO_2 is an odorless, colorless GHG, which has both natural and anthropocentric (human caused) sources. Natural sources include the following: decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropocentric sources of CO_2 are burning coal, oil, natural gas, and wood.
Methane (CH_4)	CH_4 is a flammable gas and the main component of natural gas. When one molecule of CH_4 is burned in the presence of oxygen, one molecule of CO_2 and two molecules of water are released. A natural source of CH_4 is the anaerobic decay of organic matter. Geological deposits, known as natural gas fields, also contain CH_4, which is extracted for fuel. Other sources are landfills, fermentation of manure, and cattle.
Nitrous Oxide (N_2O)	N_2O is a colorless GHG. High concentrations can cause dizziness, euphoria, and sometimes slight hallucinations. N_2O is produced by microbial processes in soil and water, including those reactions which occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load. It is used in rocket engines, race cars, and as an aerosol spray propellant.

[7] *Southern California Association of Governments, The State of the Region – Measuring Regional Progress, December 2006, page 121.*

[8] *As defined by California Assembly Bill 32 and Senate Bill 104.*

Table IV.F-1
Description of Identified Greenhouse Gases a

GHG	General Description
Hydrofluorocarbons (HFCs)	CFCs are gases formed synthetically by replacing all hydrogen atoms in methane or ethane with chlorine and/or fluorine atoms. CFCs are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the Earth's surface). CFCs were first synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. Because they destroy stratospheric ozone, the production of CFCs was stopped as required by the Montreal Protocol in 1987. HFCs are synthetic man-made chemicals that are used as a substitute for chlorofluorocarbons (CFCs) for automobile air conditioners and refrigerants. HFFCs deplete stratospheric ozone, but to a much lesser extent than CFCs.
Perfluorocarbons (PFCs)	PFCs have stable molecular structures and do not break down though the chemical processes in the lower atmosphere. High-energy ultraviolet rays about 60 kilometers above the Earth's surface are able to destroy the compounds. PFCs have very long lifetimes, between 10,000 and 50,000 years. Two common PFCs are tetrafluoromethane and hexafluoroethane. The two main sources of PFCs are primary aluminum production and semiconductor manufacture.
Sulfur Hexafluoride (SF_6)	SF_6 is an inorganic, odorless, colorless, non-toxic, and nonflammable gas. SF_6 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.
Nitrogen Trifluoride (NF_3)	An inorganic, non-toxic, odorless, non-flammable gas. NF3 is used in the manufacture of semi-conductors, as an oxidizer of high energy fuels, for the preparation of tetrafluorohydrazine, as an etchant gas in the electronic industry, and as a fluorine source in high power chemical lasers.

a GHGs identified in this table are ones identified in the Kyoto Protocol and other synthetic gases recently added to the IPCC's Fifth Assessment Report.

Source: Association of Environment Professionals, Alternative Approaches to Analyze Greenhouse Gas Emissions and Global Climate Change in CEQA Documents, Final, June 29, 2007; United States Environmental Protection Agency, Acute Exposure Guideline Levels for Nitrogen Trifluoride, January 2009.

Global Warming Potentials (GWPs) are one type of simplified index based upon radiative properties used to estimate the potential future impacts of emissions of different gases upon the climate system. GWP is based on a number of factors, including the radiative efficiency (heat-absorbing ability) of each gas relative to that of CO^2, as well as the decay rate of each gas (the amount removed from the atmosphere over a given number of years) relative to that of CO^2. The larger the GWP, the more that a given gas warms the Earth compared to CO^2 over that time period. A summary of the atmospheric lifetime[9] and GWP of selected gases is presented in **Table IV.F-2, Atmospheric Lifetimes and Global Warming Potentials**. As indicated in **Table IV.F-2**, GWPs range from 1 to 22,800.

[9] *Atmospheric lifetime is defined as the time required to turn over the global Atmospheric burden. Source: Intergovernmental Panel on Climate Change, IPCC Third Assessment Report: Climate Change 2001, Chapter 4: Atmospheric Chemistry and Greenhouse Gases, 2001, page 247.*

Table IV.F-2
Atmospheric Lifetimes and Global Warming Potentials

GHG	Atmospheric Lifetime (Years)	Global Warming Potential (100-Year)[1]
Carbon Dioxide (CO_2)	50-200	1
Methane (CH_4)	12 (+/-3)	25
Nitrous Oxide (N_2O)	.114	298
HFC-23: Fluoroform (CHF_3)	270	14,800
HFC-134a: 1,1,1,2-Tetrafluoroethane (CH_2FCF_3)	14	1,430
HFC-152a: 1,1-Difluoroethane ($C_2H_4F_2$)	1.4	124
PFC-14: Tetrafluoromethane (CF_4)	50,000	7,390
PFC-116: Hexafluoroethane (C_2F_6)	10,000	12,200
Sulfur Hexafluoride (SF_6)	3,200	22,800
Nitrogen Trifluoride (SF_6)	740	17,200
Source: IPCC, Climate Change 2007: Working Group I: The Physical Science Basis, Direct Global Warming Potentials.		

C. Projected Impacts of Global Warming in California

In 2009, California adopted a statewide Climate Adaptation Strategy (CAS) that summarizes climate change impacts and recommends adaptation strategies across seven sectors: Public health, Biodiversity and Habitat, Oceans and Coastal Resources, Water, Agriculture, Forestry, and Transportation and Energy. The California Natural Resources Agency will be updating the CAS and be responsible for preparing reports to the Governor on the status of CAS. The Natural Resources Agency produced climate change assessments which detail impacts of global warming in California.[10] These include:

- Sea level rise, coastal flooding and erosions of California's coastlines would increase, as well as sea water intrusion;
- The Sierra snowpack would decline between 70 and 90 percent, threatening California's water supply;
- Higher risk of forest fires resulting from increasing temperatures and making forests and brush drier. Climate change will affect tree survival and growth;
- Attainment of air quality standards would be impeded by increasing emissions, accelerating chemical processes, and raising inversion temperatures during stagnation episodes resulting in public health impacts;
- Habitat destruction and loss of ecosystems due to climate changing affecting plans wildlife habitats;
- Global warming can cause drought, warmer temperatures, and salt water contamination, resulting in impacts to California's agricultural industry.

With regard to public health, as reported by the Center for Health and the Global Environment at the Harvard Medical School, the following are examples of how climate change can affect cardio-respiratory

[10] *State of California, Department of Justice, Attorney General, Climate Change Impacts in California Website, accessed: August 7, 2020.*

disease: (1) pollen is increased by higher levels of atmospheric CO2; (2) heat waves can result in temperature inversions, leading to trapped masses or unhealthy air contaminants by smog, particulates, and other pollutants; and (3) the incidence of forest fires is increased by drought secondary to climate change and to the lack of spring runoff from reduced winter snows. These fires can create smoke and haze, which can settle over urban populations causing acute and exacerbating chronic respiratory illness.[11]

D. Existing Conditions

Table IV.F-3, Existing City of Sierra Madre GHG Emissions Inventory, identifies the existing community GHG emissions inventory for the City of Sierra Madre. GHG emissions generated within the City were estimated using CalEEMod.

Table IV.F-3
Existing City of Sierra Madre GHG Emissions Inventory

Sector	GHG Emissions $MTCO_2e$/Year	Percent of Emissions
Area	1,285	1%
Energy	20,052	18%
Mobile[1]	82,408	73%
Waste	5,668	5%
Water	3,449	3%
Total	**112,863**	**100%**

Source: CalEEMod, Version 2013.2.2.
Note: $MMTCO_2e$: million metric tons of CO_2e
1 Based on year 2013 emission rates.

1) *Housing Element Project Sites*

Greenhouse gases is a regional and global analysis; therefore, site specific information is not relevant to this topic.

E. Regulatory Setting

1) *Federal*

Federal Clean Air Act

The United States Supreme Court (Supreme Court) ruled in Massachusetts v. Environmental Protection Agency, 127 S.Ct. 1438 (2007), that CO2 and other GHGs are pollutants under the federal Clean Air Act (CAA), which the USEPA must regulate if it determines they pose an endangerment to public health or welfare. The Supreme Court did not mandate that the USEPA enact regulations to reduce GHG emissions. Instead, the Court found that the USEPA could avoid taking action if it found that GHGs do not contribute to climate change or if it offered a "reasonable explanation" for not determining that GHGs contribute to climate change.

[11] *Paul R. Epstein, et al., Urban Indicators of Climate Change, Report from the Center for Health and the Global Environment, Harvard Medical School and the Boston Public Health Commission, August 2003, unpaginated.*

On April 17, 2009, the USEPS issued a proposed finding that GHGs contribute to air pollution that may endanger public health or welfare. On April 24, 2009, the proposed rule was published in the Federal Register under Docket ID No. EPA-HQ-OAR-2009-0171. The USEPA stated that high atmospheric levels of GHGs "are the unambiguous result of human emissions, and are very likely the cause of the observed increase in average temperatures and other climatic changes." The USEPA further found that "atmospheric concentrations of greenhouse gases endanger public health and welfare within the meaning of Section 202 of the Clean Air Act." The findings were signed by the USEPA Administrator on December 7, 2009. The final findings were published in the Federal Register on December 15, 2009. The final rule was effective on January 14, 2010.[12] While these findings alone do not impose any requirements on industry or other entities, this action is a prerequisite to regulatory actions by the USEPA, including but not limited to, GHG emissions standards for light-duty vehicles.

On July 20, 2011, the USEPA published its final rule deferring GHG permitting requirements for CO2 emission from biomass-fired and other biogenic sources until July 21, 2014. Environmental groups have challenged the deferral. In September 2011, USEPA released an "Accounting Framework for Biogenic CO2 Emissions from Stationary Sources," which analyzes accounting methodologies and suggests implementation for biogenic CO2 emitted from stationary sources.

On April 4, 2012, USEPA published a proposed rule to establish, for the first time, a new source performance standard for GHG emissions. Under the proposed rule, new fossil fuel–fired electric generating units larger than 25 megawatts (MW) are required to limit emissions to 1,000 pounds of CO2 per MW-hour (CO2/MWh) on an average annual basis, subject to certain exceptions.

On April 17, 2012, the USEPA issued emission rules for oil production and natural gas production and processing operations, which are required by the CAA under Title 40 of the Code of Federal Regulations, Parts 60 and 63. The final rules include the first federal air standards for natural gas wells that are hydraulically fractured, along with requirements for several other sources of pollution in the oil and gas industry that currently are not regulated at the federal level.[13]

Corporate Average Fuel Economy (CAFE) Standards

In response to the *Massachusetts v. Environmental Protection Agency* ruling, the George W. Bush Administration signed Executive Order 13432 on May 14, 2007, directing the USEPA, the United States Department of Transportation (USDOT), and the United States Department of Energy (USDOE), to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. In 2009, the National Highway Traffic Safety Administration (NHTSA) issued a final rule regulating fuel efficiency for and GHG emissions from cars and light-duty trucks for model year 2011; in 2010, the USEPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012–2016.

In 2010, President Obama issued a memorandum directing the USEPA, USDOT, USDOE, and NHTSA to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, the USEPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017–2025 light-duty vehicles. The

[12] *United States Environmental Protection Agency, Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, Final Rule.*

[13] *United States Environmental Protection Agency, 2012 Final Rules for Oil and Natural Gas Industry, April 17, 2012.*

proposed standards are projected to achieve 163 grams/mile of CO_2 in model year 2025, on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon (mpg) if the standards were achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017–2021, and NHTSA intends to set standards for model years 2022–2025 in a future rulemaking. On April 2, 2018, the USEPA signed the Mid-term Evaluation Final Determination which finds that the model year 2022–2025 greenhouse gas standards are not appropriate and should be revised.[14] This Final Determination services to initiate a notice to further consider appropriate standards for model year 2022–2025 light duty vehicles. On August 24, 2018, the USEPA and NHTSA published a proposal to freeze the model year 2020 standards through model year 2026 and to revoke California's waiver under the Clean Air Act to establish more stringent standards.[15] This rollback occurred on April 30, 2020, with passage of The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks. However, on May 27, 2020, California, together with 17 other states filed a lawsuit against the EPA and the rollback of the standards stating that the EPA "acted arbitrarily and capriciously" in overturning the previous administration's decision.

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011 the USEPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014–2018. The standards for CO2 emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the USEPA, this regulatory program would reduce GHG emissions and fuel consumption for the affected vehicles by 6 to 23 percent over the 2010 baselines.[16]

Building on the first phase of standards, in August 2016, the USEPA and NHTSA finalized Phase 2 standards for medium and heavy-duty vehicles through model year 2027 that will improve fuel efficiency and cut carbon pollution. The Phase 2 standards would be expected to lower CO2 emissions by approximately 1.1 billion metric tons and save vehicle owners fuel costs of about $170 billion.[17] However, as discussed above, the USEPA and NHTSA rolled back GHG and fuel economy standards for cars and light-duty trucks, which suggests a similar rollback of Phase 2 standards for medium and heavy-duty vehicles may be pursued by the Trump administration.

Energy Independence and Security Act

On December 19, 2007, the Federal Energy Independence and Security Act of 2007 (EISA) was signed into law.[18] The EISA facilitates the following, which would aid in the reduction of national GHG emissions, both mobile and non-mobile:

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[14] *Federal Register, Mid-Term Evaluation of Greenhouse Gas Emissions Standards for Model Year 2022-2025 Light-Duty Vehicles, April 13, 2018.*

[15] *Regulations, The Safer Affordable Fuel-Efficient Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks.*

[16] *The emission reductions attributable to the regulations for medium- and heavy-duty trucks were not included in the Project's emissions inventory due to the difficulty in quantifying the reductions. Excluding these reductions results in a more conservative (i.e., higher) estimate of emissions for the Project.*

[17] *United States Environmental Protection Agency, EPA and NHTSA Adopt Standards to Reduce GHG and Improve Fuel Efficiency of Medium- and Heavy-Duty Vehicles for Model Year 2018 and Beyond, August 2016.*

[18] *Government Printing Office, Energy Independence and Security Act of 2007, January 4, 2007, accessed: September 2019.*

- Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022;
- Prescribe or revise standards affecting regional efficiency for heating and cooling products, procedures for new or amended standards, energy conservation, energy efficiency labelling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances;
- Requiring approximately 25 percent greater efficiency for light bulbs by phasing out incandescent light bulbs between 2012 and 2014; requiring approximately 200 percent greater efficiency for light bulbs, or similar energy savings, by 2020; and
- While superseded by NHTSA and U.S. EPA actions described above, EISA also set miles per gallon targets for cars and light trucks and directed the NHTSA to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks.

Additional provisions of the EISA address energy savings in government and public institutions, promoting research for alternative energy, additional research in carbon capture, international energy programs, and the creation of "green jobs."[19]

2) *State*

Executive Order S-3-05, Executive Order B-30-15, and Executive Order B-55-18

Executive Order S-3-05, issued by Governor Schwarzenegger in June 2005, established GHG emissions targets for the state, as well as a process to ensure the targets are met. The order directed the Secretary for the California Environmental Protection Agency (CalEPA) to report every two years on the state's progress toward meeting the Governor's GHG emission reduction targets. The statewide GHG targets established by Executive Order S-3-05 are as follows:

- By 2010, reduce to 2000 emission levels;[20]
- By 2020, reduce to 1990 emission levels; and
- By 2050, reduce to 80 percent below 1990 levels.

Executive Order B-30-15, issued by Governor Brown in April 2015, established an additional statewide policy goal to reduce GHG emissions 40 percent below their 1990 levels by 2030. Reducing GHG emissions by 40 percent below 1990 levels in 2030 and by 80 percent below 1990 levels by 2050 (consistent with

[19] *A green job, as defined by the United States Department of Labor, is a job in business that produces goods or provides services that benefit the environment or conserve natural resources.*

[20] *The 2010 target to reduce GHG emissions to 2000 levels was not met. Source: Rubin, Thomas A., "Does California Really Need Major Land Use and Transportation Changes to Meet Greenhouse Gas Emissions Targets?," July 3, 2013.*

Executive Order S-3-05) aligns with scientifically established levels needed in the U.S. to limit global warming below 2 degrees Celsius.[21]

The State Legislature adopted equivalent 2020 and 2030 statewide targets in the California Global Warming Solutions Act of 2006 (also known as Assembly Bill [AB] 32), and Senate Bill (SB) 32, respectively, both of which are discussed below. However, the Legislature has not yet adopted a target for the 2050 horizon year. As a result of Executive Order S-3-05, the California CAT, led by the Secretary of CalEPA, was formed. The CAT is made up of representatives from a number of state agencies and was formed to implement global warming emission reduction programs and to report on the progress made toward meeting statewide targets established under the Executive Order. The CAT reported several recommendations and strategies for reducing GHG emissions and reaching the targets established in the Executive Order.[22]

The CAT stated that smart land use is an umbrella term for strategies that integrate transportation and land-use decisions. Such strategies generally encourage jobs/housing proximity, promote transit-oriented development (TOD), and encourage high-density residential/commercial development along transit corridors. These strategies develop more efficient land-use patterns within each jurisdiction or region to match population increases, workforce, and socioeconomic needs for the full spectrum of the population. "Intelligent transportation systems" refers to the application of advanced technology systems and management strategies to improve operational efficiency of transportation systems and the movement of people, goods, and service.[23]

Executive Order B-55-18, issued by Governor Brown in September 2018, establishes a new statewide goal to achieve carbon neutrality as soon as possible, but no later than 2045, and achieve and maintain net negative emissions thereafter. Based on this executive order, the California Air Resources Board (CARB) would work with relevant state agencies to develop a framework for implementation and accounting that tracks progress towards this goal as well as ensuring future scoping plans identify and recommend measures to achieve the carbon neutrality goal.

Assembly Bill 32 (California Global Warming Act of 2006) and Senate Bill 32

The California Global Warming Solutions Act of 2006 (also known as AB 32) commits the state to achieving the following:

- By 2012, reduce to 2000 GHG emission levels;24 and
- By 2020, reduce to 1990 levels.

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[21] *California Air Resources Board, Frequently Asked Questions about Executive Order B-30-15, 2030 Carbon Target and Adaption FAQs, April 29, 2015*

[22] *California Environmental Protection Agency, Climate Action Team Report to Governor Schwarzenegger and the Legislature, March 2006.*

[23] *California Environmental Protection Agency, Climate Action Team Report to Governor Schwarzenegger and the Legislature, March 2006, page 58.*

[24] *The 2010 target to reduce GHG emissions to 2000 levels was not met. Source: Rubin, Thomas A., "Does California Really Need Major Land Use and Transportation Changes to Meet Greenhouse Gas Emissions Targets?," July 3, 2013.*

To achieve these goals, which are consistent with the California CAT GHG targets for 2010 and 2020, AB 32 mandates that CARB establish a quantified emissions cap, institute a schedule to meet the cap, implement regulations to reduce statewide GHG emissions from stationary sources consistent with the CAT strategies, and develop tracking, reporting, and enforcement mechanisms to ensure that reductions are achieved. In order to achieve the reduction targets, AB 32 requires CARB to adopt rules and regulations in an open public process that achieve the maximum technologically feasible and cost-effective GHG reductions.[25]

SB 32, signed September 8, 2016, updates AB 32 to include an emissions reductions goal for the year 2030. Specifically, SB 32 requires the state board to ensure that statewide GHG emissions are reduced to 40 percent below the 1990 level by 2030. The new plan, outlined in SB 32, involves increasing renewable energy use, imposing tighter limits on the carbon content of gasoline and diesel fuel, putting more electric cars on the road, improving energy efficiency, and curbing emissions from key industries.

Climate Change Scoping Plan

In 2008, CARB approved a *Climate Change Scoping Plan* (referred to herein as the *Climate Change Scoping Plan*) as required by SB 32.[26] Subsequently, CARB approved updates to the Climate Change Scoping Plan in 2014 (First Update) and 2017 (2017 Update), with the 2017 Update considering SB 32 (adopted in 2016) in addition to SB 32.

The *Climate Change Scoping Plan* proposed a "comprehensive set of actions designed to reduce overall carbon GHG emissions in California, improve our environment, reduce our dependence on oil, diversify our energy sources, save energy, create new jobs, and enhance public health."[27] The *Climate Change Scoping Plan* identified a range of GHG reduction actions which include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms, such as a cap-and-trade system, and an AB 32 implementation fee to fund the program.

The *Climate Change Scoping Plan* called for a "coordinated set of solutions" to address all major categories of GHG emissions. Transportation emissions were addressed through a combination of higher standards for vehicle fuel economy, implementation of the Low Carbon Fuel Standard (LCFS), and greater consideration to reducing trip length and generation through land use planning and transit-oriented development. Buildings, land use, and industrial operations were encouraged and, sometimes, required to use energy more efficiently. Utility energy providers were required to include more renewable energy sources through implementation of the Renewables Portfolio Standard.[28] Additionally, the *Climate Change Scoping Plan* emphasized opportunities for households and businesses to save energy and money

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[25] *CARB's list of discrete early action measures that could be adopted and implemented before January 1, 2010, was approved on June 21, 2007. The three adopted discrete early action measures are: (1) a low-carbon fuel standard, which reduces carbon intensity in fuels statewide; (2) reduction of refrigerant losses from motor vehicle air conditioning system maintenance; and (3) increased methane capture from landfills, which includes requiring the use of state-of-the-art capture technologies.*

[26] *Climate Change Proposed Scoping Plan was approved by CARB on December 11, 2008.*

[27] *California Air Resources Board, Climate Change Scoping Plan: A Framework for Change, December 2008.*

[28] *For a discussion of Renewables Portfolio Standard, refer to subsection 2(f)i, California Renewables Portfolio Standard.*

through increasing energy efficiency. It indicated that substantial savings of electricity and natural gas would be accomplished through "improving energy efficiency by 25 percent."

The *Climate Change Scoping Plan* identified a number of specific issues relevant to the Project, including:

- The potential of using the green building framework as a mechanism, which could enable GHG emissions reductions in other sectors (i.e., electricity, natural gas), noting that:

  > *A Green Building strategy will produce greenhouse gas savings through buildings that exceed minimum energy efficiency standards, decrease consumption of potable water, reduce solid waste during construction and operation, and incorporate sustainable materials. Combined, these measures can also contribute to healthy indoor air quality, protect human health, and minimize impacts to the environment.*

- The importance of supporting the Department of Water Resources' work to implement the Governor's objective to reduce per capita water use by 20 percent by 2020. Specific measures to achieve this goal include water use efficiency, water recycling, and reuse of urban runoff. The *Climate Change Scoping Plan* noted that water use requires significant amounts of energy, including approximately one-fifth of statewide electricity.

- Encouraging local governments to set quantifiable emission reduction targets for their jurisdictions and use their influence and authority to encourage reductions in emissions caused by energy use, waste and recycling, water and wastewater systems, transportation, and community design.

Forecasting the amount of emissions that would occur in 2020 if no actions are taken was necessary to assess the scope of the reductions California has to make to return to the 1990 emissions level by 2020 as required by AB 32. CARB originally defined the "business-as-usual" or BAU scenario as emissions in the absence of any GHG emission reduction measures discussed in the *Climate Change Scoping Plan*. For example, in further explaining CARB's BAU methodology, CARB assumed that all new electricity generation would be supplied by natural gas plants, no further regulatory action would impact vehicle fuel efficiency, and building energy efficiency codes would be held at 2005 standards. In the *Climate Change Scoping Plan*, CARB determined that achieving the 1990 emissions level in 2020 would require a reduction in GHG emissions of approximately 28.5 percent from the otherwise projected 2020 emissions level (i.e., those emissions that would occur in 2020, absent GHG-reducing laws and regulations).[29]

Subsequent to adoption of the *Climate Change Scoping Plan*, a lawsuit was filed challenging CARB's approval of the *Climate Change Scoping Plan Functional Equivalent Document* (FED) (*FED to the Climate Change Scoping Plan*). On May 20, 2011 (Case No. CPF-09-509562), the Court found that the environmental analysis of the alternatives in the *FED to the Climate Change Scoping Plan* was not sufficient under the California Environmental Quality Act (CEQA). CARB staff prepared a revised and expanded environmental analysis of the alternatives, and the *Supplemental FED to the Climate Change Scoping Plan* was approved on August 24, 2011 (*Supplemental FED*). The *Supplemental FED* indicated that there is the potential for adverse environmental impacts associated with implementation of the various GHG emission reduction measures recommended in the *Climate Change Scoping Plan*.

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[29] *California Air Resources Board, Climate Change Scoping Plan, December 2008, page 12.*

As part of the *Supplemental FED*, CARB updated the projected 2020 BAU emissions inventory based on then current economic forecasts (i.e., as influenced by the economic downturn) and emission reduction measures already in place, replacing its prior 2020 BAU emissions inventory. CARB staff derived the updated emissions estimates by projecting emissions growth, by sector, from the state's average emissions from 2006 through 2008. Specific emission reduction measures included were the million-solar-roofs program, the AB 1493 (Pavley I) motor vehicle GHG emission standards, and the LCFS.[30] In addition, CARB also factored into the 2020 BAU inventory emissions reductions associated with a 33-percent Renewable Energy Portfolio Standard (RPS) for electricity generation. Based on the new economic data, CARB determined that achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of 21.7 percent (down from 28.5 percent) from BAU conditions. When the 2020 emissions level projection also was updated to account for newly implemented regulatory measures discussed above, CARB determined that achieving the 1990 emissions level in 2020 would require a reduction in GHG emissions of 16 percent (down from 28.5 percent) from the BAU conditions.[31,32]

In 2014, CARB adopted the *First Update to the Climate Scoping Plan: Building on the Framework* (First Update).[33] The stated purpose of the First Update was to "highlight... California's success to date in reducing its GHG emissions and lay... the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050."[34] The First Update found that California is on track to meet the 2020 emissions reduction mandate established by AB 32 and noted that California could reduce emissions further by 2030 to levels squarely in line with those needed to stay on track to reduce emissions to 80 percent below 1990 levels by 2050 if the state realizes the expected benefits of existing policy goals.[35]

In conjunction with the First Update, CARB identified "six key focus areas comprising major components of the state's economy to evaluate and describe the larger transformative actions that will be needed to meet the state's more expansive emission reduction needs by 2050."[36] Those six areas were (1) energy; (2) transportation (vehicles/equipment, sustainable communities, housing, fuels, and infrastructure); (3) agriculture; (4) water; (5) waste management; and (6) natural and working lands. The First Update identified key recommended actions for each sector that would facilitate achievement of the 2050 reduction target.

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[30] *Pavley I are the first GHG standards in the nation for passenger vehicles and took effect for model years starting in 2009 to 2016. Pavley I could potentially result in 27.7 million metric tons of CO_2e reduction in 2020. Pavley II will cover model years 2017 to 2025 and potentially result in an additional reduction of 4.1 million metric tons CO_2e reduction.*

[31] *California Air Resources Board, Supplement to the AB 32 Scoping Plan FED, Table 1.2-2.*

[32] *The emissions and reductions estimates found in the Supplemental FED to the Climate Change Scoping Plan fully replace the estimates published in the Climate Change Scoping Plan. See CARB, Resolution 11-27 (Aug. 24, 2011) (setting aside approval of Climate Change Scoping Plan and associated emissions forecasts, and approving the Supplemental FED). The estimates in the 2008 document are 596 million metric tons CO_2e under 2020 BAU and a required reduction of 169 million metric tons CO_2e (28.4 percent).*

[33] *Health & Safety Code §38561(h) requires CARB to update the Scoping Plan every five years.*

[34] *California Air Resources Board, 2014 Update, May 2014, page 4.*

[35] *California Air Resources Board, 2014 Update, May 2014, page 34.*

[36] *California Air Resources Board, 2014 Update, May 2014, page 6.*

Based on CARB's research efforts, it has a "strong sense of the mix of technologies needed to reduce emissions through 2050."[37] Those technologies include energy demand reduction through efficiency and activity changes; large-scale electrification of on-road vehicles, buildings and industrial machinery; decarbonizing electricity and fuel supplies; and the rapid market penetration of efficient and clean energy technologies.

The First Update discussed new residential and commercial building energy efficiency improvements, specifically identifying progress towards zero net energy buildings as an element of meeting mid-term and long-term GHG reduction goals. The First Update expressed CARB's commitment to working with the California Public Utilities Commission (CPUC) and California Energy Commission (CEC) to facilitate further achievements in building energy efficiency.

In January 2018, CARB adopted the 2017 Climate Change Scoping Plan Update: The Strategy for Achieving California's 2030 Greenhouse Gas Target. The 2017 Update builds upon the framework established by the Climate Change Scoping Plan and the First Update while identifying new, technologically feasible, and cost-effective strategies to ensure that California meets its GHG reduction targets in a way that promotes and rewards innovation, continues to foster economic growth, and delivers improvements to the environment and public health. The 2017 Update includes policies to require direct GHG reductions at some of the State's largest stationary sources and mobile sources. These policies include the use of lower GHG fuels, efficiency regulations, and the Cap-and-Trade Program, which constrain and reduce emissions at covered sources.[38] Implementation of mobile source strategies (cleaner technology and fuels) include the following:

- At least 1.5 million zero emission and plug-in hybrid light-duty electric vehicles by 2025.
- At least 4.2 million zero emission and plug-in hybrid light-duty electric vehicles by 2030.
- Further increase GHG stringency on all light-duty vehicles beyond existing Advanced Clean Cars regulations.
- Medium- and heavy-duty GHG Phase 2.
- Innovative Clean Transit: Transition to a suite of to-be-determined innovative clean transit options. Assumed 20 percent of new urban buses purchased beginning in 2018 will be zero emission buses with the penetration of zero-emission technology ramped up to 100 percent of new sales in 2030. Also, new natural gas buses, starting in 2018, and diesel buses, starting in 2020, meet the optional heavy-duty low-NO_X standard.
- Last Mile Delivery: New regulation that would result in the use of low NO_X or cleaner engines and the deployment of increasing numbers of zero-emission trucks primarily for Class 3–7 last mile delivery trucks in California. This measure assumes ZEVs comprise 2.5 percent of new Class 3–7 truck sales in local fleets starting in 2020, increasing to 10 percent in 2025 and remaining flat through 2030.

Further reduce VMT through continued implementation of SB 375 and regional Sustainable Communities Strategies; forthcoming statewide implementation of SB 743; and potential additional VMT reduction strategies not specified in the Mobile Source Strategy but included in the document "Potential VMT Reduction Strategies for Discussion."

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[37] *California Air Resources Board, 2014 Update, May 2014, page 32.*

[38] *California Air Resources Board, 2017 Update, November 2017, page 6.*

Assembly Bill 197

AB 197, signed September 8, 2016, is a bill linked to SB 32, which prioritizes efforts to cut GHG emissions in low-income or minority communities. AB 197 requires CARB to make available, and update at least annually, on its website, the emissions of greenhouse gases, criteria pollutants, and toxic air contaminants for each facility that reports to CARB and air districts. In addition, AB 197 adds two Members of the Legislature to the CARB board as ex officio, non-voting members and also creates the Joint Legislative Committee on Climate Change Policies to ascertain facts and make recommendations to the Legislature and the houses of the Legislature concerning the state's programs, policies, and investments related to climate change.

Cap-and-Trade Program

The Climate Change Scoping Plan identified a cap-and-trade program as one of the strategies for California to reduce GHG emissions. Under cap-and-trade, an overall limit on GHG emissions from capped sectors is established, and facilities subject to the cap are able to trade permits to emit GHGs within the overall limit. According to CARB, a cap-and- trade program will help put California on the path to meet its goal of reducing GHG emissions to 1990 levels by the year 2020.[39] Program pursuant to its authority under AB 32 and the State Legislature extended the Program through 2030 with the adoption of AB 398. With continuation of the Cap-and-Trade Program, the State can achieve a 40-percent reduction target by 2030.[40]

The Cap-and-Trade Program is designed to reduce GHG emissions from major sources, such as refineries and power plants, (deemed "covered entities"). "Covered entities" subject to the Cap-and-Trade Program are sources that emit more than 25,000 metric tons CO_2e ($MTCO_2e$) per year. Triggering of the 25,000 $MTCO_2e$ per year "inclusion threshold" is measured against a subset of emissions reported and verified under the California Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (Mandatory Reporting Rule or MRR).

Under the Cap-and-Trade Program, CARB issues allowances equal to the total amount of allowable emissions over a given compliance period and distributes these to regulated entities. Covered entities are allocated free allowances in whole or in part (if eligible) and may buy allowances at auction, purchase allowances from others, or purchase offset credits. Each covered entity with a compliance obligation is required to surrender an allowance for each metric ton CO_2e of GHG they emit.

The Cap-and-Trade Program provides a firm cap, ensuring that the 2020 and 2030 statewide emission limit will not be exceeded. An inherent feature of the Cap-and-Trade Program is that it does not guarantee

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[39] *With continuation of the Cap-and-Trade Program, California can achieve a 40-percent reduction target by 2030.*

[40] *Energy and Environmental Economics (E3). "Summary of the California State Agencies' PATHWAYS Project: Long-term Greenhouse Gas Reduction Scenarios" (April 2015); Greenblatt, Jeffrey, Energy Policy, "Modeling California Impacts on Greenhouse Gas Emissions" (Vol. 78, pp. 158–172). The California Air Resources Board, California Energy Commission, California Public Utilities Commission, and the California Independent System Operator engaged E3 to evaluate the feasibility and cost of a range of potential 2030 targets along the way to the state's goal of reducing GHG emissions to 80 percent below 1990 levels by 2050. With input from the agencies, E3 developed scenarios that explore the potential pace at which emission reductions can be achieved, as well as the mix of technologies and practices deployed. E3 conducted the analysis using its California PATHWAYS model. Enhanced specifically for this study, the model encompasses the entire California economy with detailed representations of the buildings, industry, transportation, and electricity sectors.*

GHG emissions reductions in any discrete location or by any particular source. Rather, GHG emissions reductions are only guaranteed on a cumulative basis. As summarized by CARB in the First Update:

> *The Cap-and-Trade Regulation gives companies the flexibility to trade allowances with others or take steps to cost-effectively reduce emissions at their own facilities. Companies that emit more have to turn in more allowances or other compliance instruments. Companies that can cut their GHG emissions have to turn in fewer allowances. But as the cap declines, aggregate emissions must be reduced.*

For example, a covered entity theoretically could increase its GHG emissions every year and still comply with the Cap-and-Trade Program if there is a commensurate reduction in GHG emissions from other covered entities. Such a focus on aggregate GHG emissions is considered appropriate because climate change is a global phenomenon, and the effects of GHG emissions are considered cumulative.

The Cap-and-Trade Program works with other direct regulatory measures and provides an economic incentive to reduce emissions. If California's direct regulatory measures reduce GHG emissions more than expected, then the Cap-and-Trade Program will be responsible for relatively fewer emissions reductions. If California's direct regulatory measures reduce GHG emissions less than expected, then the Cap-and-Trade Program will be responsible for relatively more emissions reductions. Thus, the Cap-and-Trade Program assures that California will meet its GHG emissions reduction mandates:

> *The Cap-and-Trade Program establishes an overall limit on GHG emissions from most of the California economy—the "capped sectors." Within the capped sectors, some of the reductions are being accomplished through direct regulations, such as improved building and appliance efficiency standards, the [Low Carbon Fuel Standard] LCFS, and the 33 percent [Renewables Portfolio Standard] RPS. Whatever additional reductions are needed to bring emissions within the cap is accomplished through price incentives posed by emissions allowance prices. Together, direct regulation and price incentives assure that emissions are brought down cost-effectively to the level off the overall cap.*[41]
>
> *[T]he Cap-and-Trade Regulation provides assurance that California's 2020 limit will be met because the regulation sets a firm limit on 85 percent of California's GHG emissions.*[42]

Overall, the Cap-and-Trade Program will achieve aggregate, rather than site-specific or project-level, GHG emissions reductions. Also, due to the regulatory framework adopted by CARB in AB 32, the reductions attributed to the Cap-and-Trade Program can change over time depending on the state's emissions forecasts and the effectiveness of direct regulatory measures.

As of January 1, 2015, the Cap-and-Trade Program covered approximately 85 percent of California's GHG emissions.[43]

The Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported. Accordingly, GHG emissions associated with CEQA projects' electricity usage are covered by the Cap-and- Trade Program. The Cap-and-Trade Program also covers fuel

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[41] *California Air Resources Board, 2014 Update, May 2014, page 88.*

[42] *California Air Resources Board, 2014 Update, May 2014, page 86-87.*

[43] *Center for Climate and Energy Solutions, California Cap-and-Trade Website.*

suppliers (natural gas and propane fuel providers and transportation fuel providers) to address emissions from such fuels and from combustion of other fossil fuels not directly covered at large sources in the Program's first compliance period. Furthermore, the Cap-and-Trade Program also covers the GHG emissions associated with the combustion of transportation fuels in California, whether refined in-state or imported. The point of regulation for transportation fuels is when they are "supplied" (i.e., delivered into commerce). Accordingly, as with stationary source GHG emissions and GHG emissions attributable to electricity use, virtually all, if not all, of GHG emissions from CEQA projects associated with vehicle-miles traveled (VMT) are covered by the Cap-and-Trade Program.

AB 398 was enacted in 2017 to extend and clarify the role of the State's Cap-and-Trade Program through December 31, 2030. As part of AB 398, refinements were made to the Cap-and-Trade program to establish updated protocols and allocation of proceeds to reduce GHG emissions.

Energy-Related Sources

California Renewables Portfolio Standard

The California RPS program (SB 1078) required that 20 percent of the available energy supplies are from renewable energy sources by 2017. In 2006, SB 107 accelerated the 20-percent mandate to 2010. These mandates apply directly to investor-owned utilities. On April 12, 2011, Governor Brown signed into law SB 2X, which modified California's RPS program to require that both public and investor-owned utilities in California receive at least 33 percent of their electricity from renewable sources by the year 2020. California SB 2X also requires regulated sellers of electricity to meet an interim milestone of procuring 25 percent of their energy supply from certified renewable resources by 2016. These levels of reduction are consistent with the Los Angeles Department of Water and Power's (LADWP) commitment to achieve 35 percent renewables by 2020.

In 2019, LADWP indicated that 32 percent of its electricity came from renewable resources in Year 2018.[44] Therefore, under SB 2X, LADWP is required to increase its electricity from renewable resources by an additional 3 percent to comply with the RPS of 33 percent by 2020.

Senate Bill 350

SB 350, signed October 7, 2015, is the Clean Energy and Pollution Reduction Act of 2015. The objectives of SB 350 are: (1) to increase from 33 percent to 50 percent, the procurement of our electricity from renewable sources by 2030; and (2) to double the energy efficiency savings in electricity and natural gas final end uses of retail customers through energy efficiency and conservation.[45]

Senate Bill 100

SB 100, signed September 10, 2018, is the 100 Percent Clean Energy Act of 2018. SB 100 updates the goals of California's Renewable Portfolio Standard and SB 350, as discussed above, to the following: achieve 50-percent renewable resources target by December 31, 2026, and achieve a 60-percent target by December 31, 2030. SB 100 also requires that eligible renewable energy resources and zero-carbon resources supply

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[44] *California Public Utilities Commission, 2018 Power Content Label, Los Angeles Department of Water and Power, July 2019.*

[45] *Senate Bill 350 (2015-2016 Reg. Session) Stats 2015, ch. 547.*

100 percent of retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all state agencies by December 31, 2045.[46]

Senate Bill 1368

SB 1368, signed September 29, 2006, is a companion bill to AB 32, which requires the CPUC and the CEC to establish GHG emission performance standards for the generation of electricity. These standards also generally apply to power that is generated outside of California and imported into the state. SB 1368 provides a mechanism for reducing the emissions of electricity providers, thereby assisting CARB to meet its mandate under AB 32. On January 25, 2007, the CPUC adopted an interim GHG Emissions Performance Standard, which is a facility-based emissions standard requiring that all new long-term commitments for baseload generation to serve California consumers be with power plants that have GHG emissions no greater than a combined cycle gas turbine plant. That level is established at 1,100 pounds of CO2 per MWh. Furthermore, on May 23, 2007, the CEC adopted regulations that establish and implement an identical Emissions Performance Standard of 1,100 pounds of CO2 per MWh (see CEC Order No. 07-523-7).

Mobile Sources

Assembly Bill 1493 (Pavley I)

AB 1493, passed in 2002, requires the development and adoption of regulations to achieve "the maximum feasible reduction of greenhouse gases" emitted by noncommercial passenger vehicles, light-duty trucks, and other vehicles used primarily for personal transportation in the state. CARB originally approved regulations to reduce GHGs from passenger vehicles in September 2004, with the regulations to take effect in 2009. On September 24, 2009, CARB adopted amendments to these "Pavley" regulations that reduce GHG emissions in new passenger vehicles from 2009 through 2016.[47] Although setting emission standards on automobiles is solely the responsibility of the USEPA, the federal CAA allows California to set state-specific emission standards on automobiles if the state first obtains a waiver from the USEPA. The USEPA granted California that waiver on July 8, 2009. A comparison between the AB 1493 standards and the Federal CAFE standards was completed by CARB and the analysis determined that California emission standards are 16-percent more stringent through the 2016 model year and 18-percent more stringent for the 2020 model year.[48] CARB is also committed to further strengthening these standards beginning with 2020 model year vehicles to obtain a 45-percent GHG reduction in comparison to the 2009 model year.

In 2018, the USEPA proposed the Safer Affordable Fuel-Efficient Vehicles Rule (SAFE), which would roll back fuel economy standards and revoke California's waiver. Under this proposed rule, the US or CalEPA would amend certain average fuel economy and GHG standards for passenger cars covering model years 2021 through 2026. As of February 2020, the proposed SAFE Vehicle Rule has not yet been adopted.

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[46] *State Bill 100 (2017-2018 Reg. Session) Stats 2018, ch 312.*

[47] *California Air Resources Board, Clean Car Standards – Pavley, Assembly Bill 1493, California's Greenhouse Gas Vehicle Emission Standards Under Assembly Bill 1493 Website, accessed: August 11, 2020.*

[48] *California Air Resources Board, "Comparison of Greenhouse Gas Reductions for all Fifty United States under CAFE Standards and ARB Regulations Adopted Pursuant to AB 1493," January 23, 2008.*

On September 27, 2019, the USEPA withdrew the waiver it had previously provided to California for the State's GHG and ZEV programs under Section 209 of the Clean Air Act.[49] The withdrawal of the waiver became effective on November 26, 2019. In response, several states including California have filed a lawsuit challenging the withdrawal of the EPA waiver.[50] As of January 2020, a trial date has not been set for the lawsuit.

Executive Order S-1-07 (California Low Carbon Fuel Standard)

Executive Order S-01-07, the LCFS (issued on January 18, 2007), requires a reduction of at least 10 percent in the carbon intensity of California's transportation fuels by 2020. Regulatory proceedings and implementation of the LCFS were directed to CARB. CARB released a draft version of the LCFS in October 2008. The final regulation was approved by the Office of Administrative Law and filed with the Secretary of State on January 12, 2010; the LCFS became effective on the same day.

The development of the 2017 Update has identified LCFS as a regulatory measure to reduce GHG emission to meet the 2030 emissions target. In calculating statewide emissions and targets, the 2017 Update has assumed that the LCFS be extended to an 18-percent reduction in carbon intensity beyond 2020. In September 2018, CARB approved a carbon intensity reduction of 20 percent by 2030, in order to meet the 2030 emissions target.[51]

Advanced Clean Cars Regulations

In January 2012, CARB approved the Advanced Clean Cars Program, a new emissions-control program for model year 2017 through 2025.[52] The components of the Advanced Clean Cars program include the Low-Emission Vehicle (LEV) regulations that reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles and the Zero-Emission Vehicle (ZEV) regulation, which requires manufacturers to produce an increasing number of pure ZEVs (meaning battery electric and fuel cell electric vehicles).[53] In March 2017, CARB voted unanimously to continue with the vehicle greenhouse gas emission standards and the ZEV program for cars and light trucks sold in California through 2025.[54]

Senate Bill 375

Acknowledging the relationship between land use planning and transportation sector GHG emissions, SB 375 was signed by the Governor on September 30, 2008. This legislation links regional planning for housing and transportation with the GHG reduction goals outlined in AB 32. Reductions in GHG emissions would be achieved by, for example, locating employment opportunities close to transit. Under SB 375, each Metropolitan Planning Organization (MPO) would be required to adopt a Sustainable Community Strategy

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[49] *84 FR 51310*

[50] *United States District Court for the District Court of Columbia, State of California vs. Chao, Case 1:19-cv-02826, 2019.*

[51] *California Air Resources Board, "CARB amends Low Carbon Fuel Standard for wider impact," September 27, 2018.*

[52] *California Air Resources Board, California's Advanced Clean Cars Program, About Website, accessed: August 11, 2020.*

[53] *California Air Resources Board, California's Advanced Clean Cars Program, About Website, accessed: August 11, 2020.*

[54] *California Air Resources Board, News Release: CARB finds vehicle standards are achievable and cost-effective, March 24, 2017.*

(SCS) to encourage compact development that reduces passenger VMT and trips so that the region will meet a target, created by CARB, for reducing GHG emissions. If the SCS is unable to achieve the regional GHG emissions reduction targets, then the MPO is required to prepare an alternative planning strategy that shows how the GHG emissions reduction target could be achieved through alternative development patterns, infrastructure, and/or transportation measures.

As required under SB 375, CARB is required to update regional GHG emissions targets every 8 years with the last update formally adopted in March 2018. As part of the 2018 update, CARB has adopted a passenger vehicle related GHG reduction target of 19 percent for 2035 for the SCAG region, which is more stringent than the previous reduction target of 13 percent for 2035.[55]

Building Standards

California Appliance Efficiency Regulations (Title 20, Sections 1601 through 1608)

The 2014 Appliance Efficiency Regulations, adopted by the CEC, include standards for new appliances (e.g., refrigerators) and lighting, if they are sold or offered for sale in California. These standards include minimum levels of operating efficiency, and other cost-effective measures, to promote the use of energy- and water-efficient appliances.

California Building Energy Efficiency Standards (Title 24, Part 6)

California's Energy Efficiency Standards for Residential and Nonresidential Buildings, located at Title 24, Part 6 of the California Code of Regulations (CCR) and commonly referred to as "Title 24," were established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods.[56]

On May 9, 2018, the CEC adopted the 2019 Title 24 Standards, which went into effect on January 1, 2020. The 2019 standards continue to improve upon the previous (2016) Title 24 standards for new construction of, and additions and alterations to, residential and non-residential buildings.[57] The 2019 Title 24 Standards, the standards ensure that builders use the most energy efficient and energy conserving technologies and construction practices. As described in the 2019 Title 24 Standards represent "challenging but achievable design and construction practices" that represent "a major step towards meeting the Zero Net Energy (ZNE) goal." Single-family homes built with the 2019 Title 24 Standards are projected to use approximately 7 percent less energy due to energy efficiency measures versus those built under the 2016 standards. Once the mandated rooftop solar electricity generation is factored in, homes built under the 2019 standards will use about 53 percent less energy than those under the 2016 standards. Nonresidential buildings are projected to use approximately 30 percent less energy due mainly to lighting upgrades.[58] Compliance with Title 24 is enforced through the building permit process.

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[55] *California Air Resources Board, SB 375 Regional Greenhouse Gas Emissions Reduction Targets.*

[56] *California Energy Commission, 2019 Building Energy Efficiency Standards.*

[57] *California Energy Commission, 2019 Building Energy Efficiency Standards.*

[58] *California Energy Commission, News Release: Energy Commission Adopts Standards Requiring Solar Systems for New Homes, First in Nation, May 9, 2018.*

California Green Building Standards (CALGreen Code)

The most recent update to the California Green Building Standards Code (CCR, Title 24, Part 11), commonly referred to as the 2019 CALGreen Code, became effective on January 1, 2020. Most of the mandatory measure changes in the 2019 CALGreen Code relative to the previous 2016 CALGreen Code were related to definitions and to the clarification or addition of referenced manuals, handbooks, and standards. For example, several definitions related to energy that were added or revised affect electric vehicles chargers and charging and hot water recirculation systems. For new multi-family dwelling units, the residential mandatory measures were revised to provide additional electric vehicle charging space requirements, including quantity, location, size, single EV space, multiple EV spaces, and identification.[59] For nonresidential mandatory measures, the table (Table 5.106.5.3.3) identifying the number of required EV charging spaces has been revised in its entirety.[60] Compliance with the CALGreen Code is enforced through the building permit process.

Senate Bill 97

On June 19, 2008, the Office of Planning and Research (OPR) released a technical advisory on addressing climate change. This guidance document outlines suggested components to CEQA disclosure, including quantification of GHG emissions from a project's construction and operation; determination of significance of the project's impact to climate change; and if the project is found to be significant, the identification of suitable alternatives and mitigation measures.

SB 97, passed in August 2007, is designed to work in conjunction with CEQA and AB 32. SB 97 requires OPR to prepare and develop guidelines for the mitigation of GHG emissions or the effects thereof, including, but not limited to, the effects associated with transportation and energy consumption. The Draft Guidelines Amendments for Greenhouse Gas Emissions (Guidelines Amendments) were adopted on December 30, 2009, and address the specific obligations of public agencies when analyzing GHG emissions under CEQA to determine a project's effects on the environment.

However, neither a threshold of significance nor any specific mitigation measures are included or provided in the Guidelines Amendments.[61] The Guideline Amendments require a lead agency to make a good-faith effort, based on the extent possible on scientific and factual data, to describe, calculate, or estimate the amount of GHG emissions resulting from a project. The Guidelines Amendments give discretion to the lead agency whether to: (1) use a model or methodology to quantify GHG emissions resulting from a project, and which model or methodology to use; or (2) rely on a qualitative analysis or performance-based standards. Furthermore, the Guidelines Amendments identify three factors that should be considered in the evaluation of the significance of GHG emissions:

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[59] *California Building Standards Commission, 2019 California Green Building Standards Code, California Code of Regulations, Title 24, Part 11, Chapter 4 – Residential Mandatory Measures, effective: January 1, 2020.*

[60] *California Building Standards Commission, 2019 California Green Building Standards Code, California Code of Regulations, Title 24, Part 11, Chapter 5 – Nonresidential Mandatory Measures, effective: January 1, 2020.*

[61] *See 14 Cal. Code Regs. §15064.7 (generally giving discretion to lead agencies to develop and publish thresholds of significance for use in the determination of the significance of environmental effects), and §15064.4 (giving discretion to lead agencies to determine the significance of impacts from GHGs).*

- The extent to which a project may increase or reduce GHG emissions as compared to the existing environmental setting;
- Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and
- The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.[62]

The administrative record for the Guidelines Amendments also clarifies "that the effects of greenhouse gas emissions are cumulative, and should be analyzed in the context of CEQA's requirements for cumulative impact analysis."[63]

The California Natural Resources Agency is required to periodically update the Guidelines Amendments to incorporate new information or criteria established by CARB pursuant to AB 32. SB 97 applies retroactively to any EIR, negative declaration, mitigated negative declaration, or other document required by CEQA, which has not been finalized.

Centre for Biological Diversity v. California Department of Fish and Wildlife

The California Supreme Court's decision published on November 30, 2015, in the *Center for Biological Diversity v. California Department of Fish and Wildlife* (62 Cal.4th 204) (also known as the "Newhall Ranch Case") reviewed the methodology used to analyze GHG emissions in an EIR prepared for a project that proposed 20,885 dwelling units with 58,000 residents on 12,000 acres of undeveloped land in a rural area of the County of Los Angeles. The EIR used a "business as usual" (BAU) approach to determine whether the project would impede the state's compliance with statutory emissions reduction mandate established by the AB 32 *Climate Change Scoping Plan*. The Court did not invalidate the BAU approach entirely but did hold that "the Scoping Plan nowhere related that *statewide* level of reduction effort to the percentage of reduction that would or should be required from *individual projects a*nd nothing DFW or Newhall have cited in the administrative record indicates the required percentage reduction from business as usual is the same for an individual project as for the entire state population and economy."[64]

The California Supreme Court suggested regulatory consistency as one pathway to compliance, by stating that a lead agency might assess consistency with AB 32's goal in whole or in part by looking to compliance with regulatory programs designed to reduce GHG emissions from particular activities. The Court stated that a lead agency might assess consistency with AB 32's goal in whole or part by looking to compliance with regulatory programs designed to reduce greenhouse gas emissions from particular activities, including statewide programs and local climate action plans or GHG emissions reduction plans. This approach is consistent with CEQA Guidelines Section 15064, which provides that a determination that an impact is not cumulatively considerable may rest on compliance with previously adopted plans or regulations, including plans or regulations for the reduction of GHG emissions. The Court also suggested:

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[62] *14 CCR §15064.4(b).*

[63] *Letter from Cynthia Bryant, Director of the Governor's Office of Planning and Research to Mike Chrisman, California Secretary for Natural Resources, dated April 13, 2009.*

[64] *Center for Biological Diversity v. California Department of Fish and Wildlife (62 Cal.4th 204, 230), page 20.*

"A lead agency may rely on existing numerical thresholds of significance for greenhouse gas emissions" (bright line threshold approach) if supported by substantial evidence.

3) *Regional*

South Coast Air Quality Management District

The Southern California Air Quality Management District (SCAQMD) adopted a "Policy on Global Warming and Stratospheric Ozone Depletion" on April 6, 1990. The policy commits SCAQMD to consider global impacts in rulemaking and in drafting revisions to the Air Quality Management Plan. In March 1992, the SCAQMD Governing Board reaffirmed this policy and adopted amendments to the policy to include the following directives:

- Phase out the use and corresponding emissions of chlorofluorocarbons, methyl chloroform (1,1,1-tri-chloroethane or TCA), carbon tetrachloride, and halons by December 1995;
- Phase out the large quantity use and corresponding emissions of hydrochlorofluorocarbons by the year 2000;
- Develop recycling regulations for hydrochlorofluorocarbons (e.g., SCAQMD Rules 1411 and 1415);
- Develop an emissions inventory and control strategy for methyl bromide; and
- Support the adoption of a California GHG emission reduction goal.

In 2008, SCAQMD released draft guidance regarding interim CEQA GHG significance thresholds.[65] Within its October 2008 document, SCAQMD proposed the use of a percent emission reduction target to determine significance for commercial/residential projects that emit greater than 3,000 $MTCO_2e$ per year. Under this proposal, commercial/residential projects that emit fewer than 3,000 $MTCO_2e$ per year would be assumed to have a less than significant impact on climate change. On December 5, 2008, the SCAQMD Governing Board adopted the staff proposal for an interim GHG significance threshold of 10,000 $MTCO_2e$ per year for stationary source/industrial projects where SCAQMD is the lead agency. However, SCAQMD has yet to adopt a GHG significance threshold for land use development projects (e.g., residential/commercial projects); therefore, the proposed draft commercial/residential thresholds were not formally adopted.

Southern California Association of Governments

SB 375 requires the MPOs to prepare a Sustainable Communities Strategy (SCS) in their regional transportation plan. For the SCAG region, the 2020-2045 RTP/SCS (Connect SoCal) was adopted on September 2, 2020. Connect SoCal is a long-range visioning plan that builds upon and expands land use and transportation strategies established over several planning cycles to increase mobility options and achieve a more sustainable growth pattern. Connect SoCal is meant to provide growth strategies that will achieve the regional GHG emissions reduction targets. However, Connect SoCal does not require that local

[65] *South Coast Air Quality Management District, Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold, October 2008, Attachment E.*

general plans, specific plans, or zoning be consistent with Connect SoCal, but provides incentives for consistency for governments and developers.

4) *Local*

City of Sierra Madre Municipal Code

The City has adopted and incorporated the 2013 California Green Building Standards Code into Chapter 15.30 (Green Building Standards Code) of the municipal code.

City of Sierra Madre Energy Action Plan

The City of Sierra Madre prepared the Energy Action Plan (EAP) in conjunction with the San Gabriel Valley Council of Governments (SGVCOG), a SCAG subregion, and Southern California Edison (SCE) as part of supporting the California Long-Term Energy Efficiency Strategic Plan (CEESP). The EAP, although not officially adopted by the City, is a stand-alone document and was prepared with the intention of serving as an equivalent to an electricity efficiency chapter of a climate action plan. It identifies both municipal and community-wide strategies to achieve long-term electricity efficiency goals. It also serves as part of the state and regional effort for achieving energy efficiency and reducing GHG emissions. The specific objectives of the EAP are to:

- Create a long-term vision for energy efficiency;
- Provide and assess information related to energy use and GHG emissions;
- Establish reduction targets for energy efficiency;
- Identify goals, policies, and actions to achieve energy reductions; and
- Provide a framework to implement the identified goals, policies, and actions.

Under the premise of meeting the State-recommended GHG reduction target of 15 percent below baseline levels by year 2020, the EAP sets the following energy efficiency targets for Sierra Madre:

- Reduce annual existing residential electricity usage by 3,445,656 kilowatt-hours (kWh) to achieve a 10 percent reduction below year 2010 baseline residential electricity use by year 2020.
- Reduce annual existing nonresidential electricity use by 1,272,644 kWh to achieve a 10 percent reduction below year 2010 baseline nonresidential electricity use by year 2020.
- Reduce annual municipal electricity use by 342,140 kWh to achieve a 10 percent reduction below year 2010 baseline municipal electricity use by year 2020.
- Achieve a net zero electricity in new residential and nonresidential buildings by 2020.

The EAP strategy to meet these electricity reduction targets involves setting goals, policies, and implementation actions focused around seven topic areas. The seven topic areas are 1) Existing Residential Buildings, 2) Existing Nonresidential Buildings, 3) New Development, 4) Planning Framework, 5) Urban Cooling, 6) Water & Electricity Efficiency, and 7) Municipal Operations. The goals corresponding to these seven topic areas include:

- **Goal 1:** Achieve maximum energy efficiency of the City's aging housing stock while reducing energy costs and enhancing the quality of historic and unique residences.
- **Goal 2:** Energy efficiency will strengthen the operational efficiency, quality, and viability of local businesses and the City's village core.
- **Goal 3:** All new development and significant remodels will have a net zero community-wide energy demand by 2020.

- **Goal 4:** Integrate energy efficiency in the City's regulatory and policy framework.
- **Goal 5:** Enhance the quaint, tree-lined, and pedestrian-scale nature of existing neighborhoods.
- **Goal 6:** Integrate water-related energy conservation and efficiency practices in new and existing development.
- **Goal 7:** Reduce municipal electricity use at City facilities 10 percent below baseline 2010 levels by 2020.

City of Sierra Madre 2035 General Plan

The following are relevant policies and implementation measures of the Sierra Madre General Plan and Implementation Program.

General Plan Policies

Land Use Element

- Policy L1.6: Require that new residential development, substantial remodeling and additions comply with all adopted water conservation measures that reduce and minimize the impact on the City's water supply and its ability to serve its water customers.
- Policy L4.3: Ensure that new development and the expansion of existing uses incorporate water conservation measures that reduce and minimize the impact on the City's water supply and its ability to serve its customers.
- Policy L8.1: Encourage the use of sustainable materials in the design and construction of structures and landscapes.
- Policy L8.2: Incorporate water conservation measures in the zoning development standards for new construction and substantial remodeling or building expansion, including but not limited to green building construction, the percentage of permeable ground surfaces, building floor area limitations, lot coverage, landscaping and irrigation, greywater plumbing requirements, rainwater capture, and design review.
- Policy L8.3: Consider a water impact fee to apply to new residential dwelling units and additions to existing development that increase water consumption, to fund water fixture retrofits of existing homes and other water conservation measures.
- Policy L8.5: Provide incentives for property owners to retrofit historically designated homes with water saving fixtures.
- Policy L15.4: Limit the use of irrigation systems in landscaping to comply with water conservation measures and provide for natural habitat and erosion control.
- Policy L16.1: Minimize the amount of grading and removal of natural vegetation.
- Policy L16.2: Require that home sites be planned, developed and designed to:
    - Eliminate fire hazards.
    - Prevent land instability.
    - Prevent exposure to geological and geotechnical hazards.

  - Provide adequate drainage controls to prevent flooding and landslides.
  - Prevent any other hazard or threat to the public health, safety, and welfare.
  - Use the minimum amount of water possible for landscaping and interior uses.
- Policy L26.4: Provide incentives for property owners to retrofit historically designated properties with water saving fixtures.
- Policy L28.1: Encourage adaptive reuse of the existing structures and prohibit the demolition and replacement of residential structures with development which contains commercial uses only.
- Policy L29.1: Allow for existing structures to be converted to limited office and business use, but require that any new development (construction) include residential uses or both residential and limited business uses.
- Policy L41.2: Allow for the expansion of existing institutional sites, including height and density beyond that allowed in adjacent commercial and residential areas, provided that a comprehensive master plan is approved by the City which demonstrates that the project:
  - Contains activities and functions which will be a significant asset for the City.
  - Adequately mitigates all impacts attributable to the increase in floor area ratio and height.
  - Conveys the village theme in its siting of structures, massing, scale, use of open space and architectural character.
  - Preserves historic structures to the maximum extent possible.
  - Provides additional benefits to the community above those which can be exacted to account for the direct impacts of the development. Such benefits can include making available parking to the public when not needed for the use, dedicating on-site recreational space or parkland facilities for public meetings, making day care available to the public, contributing to park site acquisition, and offsetting impacts to historic structures with monetary contribution to a preservation fund.
  - Will not displace or encroach into existing commercial uses.
  - Incorporates water conservation practices such as but not limited to greywater plumbing, permeable ground surfaces, drought tolerant landscaping, green building materials, rainwater capture devices, and low-flow fixtures.
- Policy L49.7: Improve pedestrian connections between the street and the public parking lots through signage, coordination with property owners, purchase of properties and other mechanisms.
- Policy L49.9: Encourage outdoor dining, sidewalk sales, street fairs, and other uses of the sidewalk which encourage pedestrian activity.
- Policy L51.3: Maintain existing facilities for bicyclists, pedestrians, and transit users.
- Policy L51.4: Explore the development of new facilities for bicyclists, pedestrians and transit users.
- Policy L51.5: Encourage and support the use of non-automotive travel throughout the City.

- Policy L51.6: Encourage City staff, employees, residents and visitors to walk and bicycle as often as possible.
- Policy L51.7: Utilize non-automotive transportation solutions as a tool to further goals related to environmental sustainability and economic development.
- Policy L51.8: Prioritize improvements for non-vehicular modes like bicycles, pedestrians, and transit to eliminate the need for new or expanded roadways and intersection improvements like traffic signals.
- Policy L52.1: Ensure that all pedestrians, particularly seniors and the disabled, are able to travel safely and easily throughout the City.
- Policy L52.2: Prioritize opportunities to implement traffic calming techniques and limit new driveway curb cuts along roadways, such as Sierra Madre Boulevard and East Montecito.
- Policy L52.3: Provide safe travel routes for bicyclists including designated bicycle lanes on streets where these facilities can be accommodated.
- Policy L52.4: Evaluate the impact of any capital improvement project on the travel needs of bicycles, pedestrians, and vehicle users.
- Policy L52.6: Improve pedestrian crossing opportunities work to increase pedestrian safety, and eliminate painted crosswalks where they provide a false sense of security, and make a more concerted effort to enforce laws related to pedestrian safety.
- Policy L52.7: Create and implement a City bikeway plan.
- Policy L52.8: Require the incorporation of bicycle facilities into the design of land use plans and capital improvements, including bicycle parking within new multi-family and non-residential sites or publicly accessible bicycle parking.
- Policy L52.9: Explore the possibility of sidewalk continuity where feasible.

Resource Management Element

- Policy R6.2: Discourage continuous all-night exterior lighting and encourage motion-sensored lighting.
- Policy R7.1: The City shall use the lowest wattage of lamp that is feasible and encourage the public to do the same.
- Policy R7.2: The City shall, whenever possible, turn off the lights or use motion sensor-controlled lighting and encourage the public to do the same.
- Policy R7.3: Investigate the possibility of having businesses turn off lights when they are closed.
- Policy R12.4: Identify ways in which reclaimed water can be utilized in Sierra Madre.
- Policy R15.1: Prohibit washing of concrete surfaces such as sidewalks and driveways with a hose.
- Policy R15.4: Restrict hours of water usage for landscape and irrigation.

- Policy R17.1: Diligently carry out minimum control measures and source reduction programs as required and/or is beneficial to water quality.
- Policy R19.1: Require the waste collection provider to provide recycling bins to all customers in the City, including in the business district. Cardboard should be collected at sites in the business district.
- Policy R19.3: Continue to enforce the Construction and Demolition Ordinance to require builders to separate and recycle discarded building materials, including lumber, metal, cement, etc.
- Policy R19.4: City offices shall purchase and use post-consumer and recycled products to the extent feasible.
- Policy R19.5: Promote green waste and recycling programs such as "green and clean" which increase the usage of green waste for compost and reduces the amount of green waste exported.
- Policy R22.1: Cooperate with the South Coast Air Quality Management District and incorporate the provisions of the Air Quality Management Plan.
- Policy R22.2: Prohibit the development of land uses and land use practices which would contribute significantly to poor air quality.
- Policy R22.3: Establish controls and monitor uses in the City which contain operations or materials characterized by air pollutants which individually or cumulatively could significantly add to the air basin's degradation (e.g., furniture manufacturers using paints and finishes, automobile repair, printing, and reproduction, and dry cleaners).
- Policy R22.4: Encourage and participate in regional initiatives and programs to improve the South Coast Air Basin's air quality.
- Policy R22.5: Publicize the incentives offered by the Southern California Air Quality Management District, such as leaf blower and lawnmower exchanges.
- Policy R23.1: Establish a transportation system management program to encourage the use of transit, carpooling, shuttles and other transportation options to reduce vehicle miles traveled and vehicle trips.
- Policy R23.2: Encourage public and school bus owners to convert to lower emission burning fuel, which is part of the Southern California Air Quality Management District Plan.
- Policy R23.3: Continue to purchase automobiles and other vehicles that use zero or low emission fuels for the City's fleet of vehicles.
- Policy R23.4: Allow for local job opportunities including home based businesses and telecommuting in Sierra Madre.
- Policy R23.5: Provide opportunities through appropriate zoning for the development of residential units in concert with commercial uses.
- Policy R23.6: Provide and enhance local transit service to reduce personal vehicle trips.
- Policy R23.7: Maintain links to the MTA Gold Line light rail system.

- Policy R23.8: Pursue funding sources for facilities and programs linked to regional transit.
- Policy R24.1: Continue to review guidelines from time to time regarding the use of gas-powered lawn equipment, and consider tightening the restrictions on the type of equipment, hours and duration of operation.

Community Services Element

- Policy C26.1: Explore other transit funding sources.
- Policy C26.2: Develop inter-jurisdictional coordination of the transportation program with Arcadia and/or Pasadena, thereby sharing the cost of the program.
- Policy C26.4: Continue to provide the free fixed route services for the community.
- Policy C26.5: Continue to coordinate discounted transit services for seniors, handicapped individuals, or low- income residents.
- Policy C27.1: Continue to provide comprehensive information to the transit user that is informative, accessible, and easy to understand.
- Policy C28.1: Continue to work with the Los Angeles County Metropolitan Transit Authority (Metro) to maintain the existing bus routes linking the City to the Gold Line train station in Pasadena and Arcadia.
- Policy C30.6: Offer bicycle safety and traffic courses for the community sponsored by the Police and Community Services Departments.

Implementation Program Measures

Land Use Implementation Program

- Measure IM-3: The City shall amend the Municipal Code as necessary to include a requirement for compliance with all adopted water conservation measures.
- Measure IM-51: The City shall amend the C (Commercial) Zoning Ordinance as necessary to prohibit new and the expansion of institutional facilities, allow a diversity of commercial uses for local residents and visitors, allow residential uses at the rear and above the first floor, and establish a minimum depth for commercial uses with residential at the rear.
- Measure IM-53: The City shall amend the M (Manufacturing) Zoning Ordinance as necessary to allow adaptive reuse of existing structures for mixed-use, light manufacturing that supports design-related industries, a diversity of craft-related businesses, entertaining/specialty stores, professional offices, live/work space, and housing units on the second level or to the rear of buildings.
- Measure IM-56: The City shall amend the M (Manufacturing) Zoning Ordinance to change the title to “Artisan Mixed Use” Zoning Ordinance and include regulations regarding commercial, light-manufacturing and residential uses, including maximum allowable floor area requirements.

Economic Development Implementation Program

- Measure IM-4: The City shall develop a plan that addresses parking, walkability, and pedestrian activity in the core area.

Circulation Implementation Program

- Measure IM-3: The City shall continue to set aside sufficient budget to maintain facilities for bicyclists (such as signage and pavement marking), pedestrians and transit users. The City shall also consider whether additional funds are available to develop new facilities.
- Measure IM-4: The City shall prepare and implement a Citywide Sidewalk Master Plan, to include sidewalk maintenance and prioritization of sidewalk infill projects.
- Measure IM-5: The City shall analyze opportunities to provide bicycle facilities in the city and include them in the new bikeway plan where appropriate.
- Measure IM-8: The City shall review Municipal Code Sections relating to parking, crosswalks, and pedestrian safety and amend as necessary.
- Measure IM-9: The City shall publicize and encourage the use of public transportation programs, such as light rail, bus, and paratransit services.

Tree Preservation Implementation Program

- Measure IM-1: The City shall continue to enforce the City's existing Tree Preservation Ordinance.
- Measure IM-3: The City shall implement the recommendations of the Community Forest Management Plan.

Waste Management and Recycling Implementation Program

- Measure IM-2: The City shall encourage recycling through the purchase of recycled products, enforcement of recycling of construction and demolition debris, and the promotion of composting and green waste programs.

Air Quality Implementation Program

- Measure IM-1: The City shall ensure that it complies with the South Coast Air Quality Management District Air Quality Management Plan, and other regional initiatives and programs to improve air quality.
- Measure IM-2: The City shall continue to assess the air quality impacts from proposed developments and land uses through the environmental review process.
- Measure IM-3: The City shall continue to enforce and abide by the requirements of the South Coast Air Quality Management District regarding air pollutant thresholds.
- Measure IM-4: Staff shall keep apprised of incentives offered by the South Coast Air Quality Management District and shall provide that information to the community.
- Measure IM-5: The City shall purchase low or zero emissions alternate-fuel vehicles for its fleet wherever possible.

- Measure IM-6: The City shall create a transportation brochure to provide the public with multiple options for reducing miles traveled and vehicle trips.
- Measure IM-7: The City shall continue home-based businesses pursuant to the Home Occupation Permit Ordinance.
- Measure IM-8: The City shall continue to allow residential business above or at the rear of commercial uses in the Commercial Zone.
- Measure IM-9: The City shall continue to provide the fixed route local transportation services and provide increase social media marketing for greater public awareness.
- Measure IM-10: The City shall continue to partner with MTA and attend quarterly meetings to ensure access to the Gold Line light rail system.
- Measure IM-11: The City shall partner with regional transit providers to identify funding sources to expand transportation programs.
- Measure IM-12: The City shall continue to enforce the Noise Ordinance and amend as necessary with respect to the use of gas-powered lawn equipment.
- Measure IM-13: The City shall continue to enforce dust abatement measures during grading and construction.
- Measure IM-14: The City shall continue to enforce applicable City ordinances, as well as regional regulations pertaining to fugitive dust control.

Transit Services Implementation Program

- Measure IM-4: The City will maintain contractual agreements with the transit provider to continue to provide the fixed route service at no cost to users.
- Measure IM-6: The City will continue to attend Metro meetings to maintain services within Sierra Madre and access to the Goldline Station.
- Measure IM-8: The City will consider the availability of City parking lots to determine whether a Park-and-Ride lot is feasible.
- Measure IM-12: The City will develop a new program that teaches bicycle safety.

3. ENERGY - ENVIRONMENTAL SETTING

A. Existing Energy Conditions

California's estimated annual energy use as of 2019 included:

- Approximately 277,704 gigawatt hours of electricity; [66]

[66] *California Energy Commission. Energy Almanac. Total Electric Generation. [Online] 2020.*

- Approximately 2,154,030 million cubic feet of natural gas per year[67];and
- Approximately 23.2 billion gallons of transportation fuel (for the year 2015)[68].

As of 2019, the year of most recent data currently available by the United States Energy Information Administration (EIA), energy use in California by demand sector was:

- Approximately 39.4 percent transportation;
- Approximately 23.1 percent industrial;
- Approximately 18.7 percent residential; and
- Approximately 18.8 percent commercial.[69]

California's electricity in-state generation system generates approximately 200,475 gigawatt-hours each year. In 2019, California produced approximately 72 percent of the electricity it uses; the rest was imported from the Pacific Northwest (approximately 9 percent) and the U.S. Southwest (approximately 19 percent). Natural gas is the main source for electricity generation at approximately 42.97 percent of the total in-state electric generation system power as shown in Table IV.F-4.

Table IV.F.4
Total Electricity System Power (California 2019)

Fuel Type	California In-State Generation (GWh)	Percent of California In-State Generation	Northwest Imports (GWh)	Southwest Imports (GWh)	Total Imports (GWh)	Percent of Imports	California Power Mix (GWh)	Percent California Power Mix
Coal	248	0.12%	219	7,765	7,985	10.34%	8,233	2.96%
Natural Gas	86,136	42.97%	62	8,859	8,921	11.55%	95,057	34.23%
Nuclear	16,163	8.06%	39	8,743	8,782	11.37%	24,945	8.98%
Oil	36	0.02%	0	0	0	0.00%	36	0.01%
Other (Petroleum Coke/Waste Heat)	411	0.20%	0	11	11	0.01%	422	0.15%
Large Hydro	33,145	16.53%	6,387	1,071	7,458	9.66%	40,603	14.62%
Unspecified Sources of Power	0	0.00%	6,609	13,767	20,376	26.38%	20,376	7.34%
Renewables	64,336	32.09%	10,615	13,081	23,696	30.68%	88,032	31.70%
Biomass	5,851	2.92%	903	33	936	1.21%	6,787	2.44%
Geothermal	10,943	5.46%	99	2,218	2,318	3.00%	13,260	4.77%
Somall Hydro	5,349	2.67%	292	4	296	0.38%	5,646	2.03%

https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2019-total-system-electric-generation.

[67]*Natural Gas Consumption by End Use. U.S. Energy Information Administration. [Online] August 31, 20020. https://www.eia.gov/dnav/ng/ng_cons_sum_dcu_SCA_a.htm.*

[68]*California Energy Commission. Revised Transportation Energy Demand Forecast 2018-2030. [Online] April 19, 2018. https://www.energy.ca.gov/assessments/*

[69]*U.S. Energy Information Administration. California Energy Consumption by End-Use Sector. California State Profile and Energy Estimates.[Online] June 25, 2021 https://www.eia.gov/state/?sid=CA#tabs-2*

Table IV.F.4
Total Electricity System Power (California 2019)

Fuel Type	California In-State Generation (GWh)	Percent of California In-State Generation	Northwest Imports (GWh)	Southwest Imports (GWh)	Total Imports (GWh)	Percent of Imports	California Power Mix (GWh)	Percent California Power Mix
Solar	28,513	14.22%	282	5,295	5,577	7.22%	34,090	12.28%
Wind	13,680	6.82%	9,038	5,531	14,569	18.87%	28,249	10.17%
Total	200,475	100.00%	23,930	53,299	77,229	100.00%	277,704	100.00%

Notes:
[1] Source: California Energy Commission. 2019 Total System electric Generation. https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2019-total-system-electric-generation

A summary of and context for energy consumption and energy demands within the State is presented in "U.S. Energy Information Administration, California State Profile and Energy Estimates, Quick Facts" excerpted below:

- California was the seventh-largest producer of crude oil among the 50 states in 2019, and, as of January 2020, it ranked third in oil refining capacity. Foreign suppliers, led by Saudi Arabia, Iraq, Ecuador, and Colombia, provided more than half of the crude oil refined in California in 2019.
- California is the largest consumer of both jet fuel and motor gasoline among the 50 states and accounted for 17% of the nation's jet fuel consumption and 11% of motor gasoline consumption in 2019. The state is the second-largest consumer of all petroleum products combined, accounting for 10% of the U.S. total.
- In 2018, California's energy consumption was second-highest among the states, but its per capita energy consumption was the fourth-lowest due in part to its mild climate and its energy efficiency programs.
- In 2019, California was the nation's top producer of electricity from solar, geothermal, and biomass energy, and the state was second in the nation in conventional hydroelectric power generation.
- In 2019, California was the fourth-largest electricity producer in the nation, but the state was also the nation's largest importer of electricity and received about 28% of its electricity supply from generating facilities outside of California, including imports from Mexico.[70].

As indicated above, California is one of the nation's leading energy-producing states, and California per capita energy use is among the nation's most efficient. Given the nature of the proposed project, the remainder of this discussion will focus on the three sources of energy that are most relevant to the project—namely, electricity and natural gas for building uses, and transportation fuel for vehicle trips associated with the proposed project.

[70] *State Profile and Energy Estimates. Independent Statistics and Analysis. [Online] [Cited: January 16, 2020.] http://www.eia.gov/state/?sid=CA#tabs2.*

1) *Electricity*

Electricity would be provided to the future development accommodate under the Housing Element by Southern California Edison (SCE). SCE provides electric power to more than 15 million persons, within a service area encompassing approximately 50,000 square miles.[71] SCE derives electricity from varied energy resources including: fossil fuels, hydroelectric generators, nuclear power plants, geothermal power plants, solar power generation, and wind farms. SCE also purchases from independent power producers and utilities, including out-of-state suppliers.[72] Table IV.F-5 identifies SCE's specific proportional shares of electricity sources in 2019.

Table IV.5
SCE 2019 Power Content Mix

Energy Resources	2019 SCE Power Mix
Eligible Renewable	35%
Biomass & Waste	1%
Geothermal	6%
Eligible Hydroelectric	1%
Solar	16%
Wind	12%
Coal	0%
Large Hydroelectric	8%
Natural Gas	16%
Nuclear	8%
Other	0%
Unspecified Sources of power*	33%
Total	100%

Notes:
[1]https://www.sce.com/sites/default/files/inline-files/SCE_2019PowerContentLabel.pdf
*Unspecified sources of power means electricity from transactions that are not traceable to specific generation sources.

2) *Natural Gas*

Natural gas would be provided to the future development accommodate under the Housing Element by Southern California Gas (SoCalGas). The following summary of natural gas resources and service providers, delivery systems, and associated regulation is excerpted from information provided by the California Public Utilities Commission (CPUC).

The CPUC regulates natural gas utility service for approximately 11 million customers that receive natural gas from Pacific Gas and Electric (PG&E), Southern California Gas (SoCalGas), San Diego Gas & Electric (SDG&E), Southwest Gas, and several smaller investor-owned natural gas utilities. The CPUC also regulates independent storage operators Lodi Gas Storage, Wild Goose Storage, Central Valley Storage and Gill Ranch Storage.

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[71] *https://www.sce.com/about-us/who-we-are/leadership/our-service-territory*

[72] *California Energy Commission. Utility Energy Supply plans from 2015. https://www.energy.ca.gov/almanac/electricity_data/supply_forms.html*

The vast majority of California's natural gas customers are residential and small commercial customers, referred to as "core" customers. Larger volume gas customers, like electric generators and industrial customers, are called "noncore" customers. Although very small in number relative to core customers, noncore customers consume about 65% of the natural gas delivered by the state's natural gas utilities, while core customers consume about 35%.

The PUC regulates the California utilities' natural gas rates and natural gas services, including in-state transportation over the utilities' transmission and distribution pipeline systems, storage, procurement, metering and billing.

Most of the natural gas used in California comes from out-of-state natural gas basins. In 2017, for example, California utility customers received 38% of their natural gas supply from basins located in the U.S. Southwest, 27% from Canada, 27% from the U.S. Rocky Mountain area, and 8% from production located in California."[73]

Transportation Energy Resources

The project would attract additional vehicle trips with resulting consumption of energy resources, predominantly gasoline and diesel fuel. Gasoline (and other vehicle fuels) are commercially-provided commodities and would be available to the project patrons and employees via commercial outlets.

The most recent data available shows the transportation sector emits 40 percent of the total greenhouse gases in the state and about 84 percent of smog-forming oxides of nitrogen (NOx).[74,75] About 28 percent of total United States energy consumption in 2019 was for transporting people and goods from one place to another. In 2019, petroleum comprised about 91 percent of all transportation energy use, excluding fuel consumed for aviation and most marine vessels.[76] In 2020, about 123.49 billion gallons (or about 2.94 billion barrels) of finished motor gasoline were consumed in the United States, an average of about 337 million gallons (or about 8.03 million barrels) per day.[77]

B. Regulatory Background

Federal and state agencies regulate energy use and consumption through various means and programs. On the federal level, the United States Department of Transportation, the United States Department of Energy, and the United States Environmental Protection Agency are three federal agencies with substantial influence over energy policies and programs. On the state level, the PUC and the California

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[73] *California Public Utilities Commission. Natural Gas and California. http://www.cpuc.ca.gov/natural_gas/*

[74] *CARB. California Greenhouse Gas Emissions Inventory 2000-2018 -2020 Edition. https://www.arb.ca.gov/cc/inventory/data/data.htm*

[75] *CARB. 2016 SIP Emission Projection Data. https://www.arb.ca.gov/app/emsinv/2017/emseic1_query.php?F_DIV=-4&F_YR=2012&F_SEASON=A&SP=SIP105ADJ&F_AREA=CA*

[76] *US Energy Information Administration. Use of Energy in the United States Explained: Energy Use for Transportation. https://www.eia.gov/energyexplained/?page=us_energy_transportation*

[77] *https://www.eia.gov/tools/faqs/faq.php?id=23&t=10*

Energy Commissions (CEC) are two agencies with authority over different aspects of energy. Relevant federal and state energy-related laws and plans are summarized below.

1) *Federal*

Corporate Average Fuel Economy (CAFE) Standards

First established by the U.S. Congress in 1975, the Corporate Average Fuel Economy (CAFE) standards reduce energy consumption by increasing the fuel economy of cars and light trucks. The National Highway Traffic Safety Administration (NHTSA) and U.S. Environmental Protection Agency (USEPA) jointly administer the CAFE standards. The U.S. Congress has specified that CAFE standards must be set at the "maximum feasible level" with consideration given for: (1) technological feasibility; (2) economic practicality; (3) effect of other standards on fuel economy; and (4) need for the nation to conserve energy.

Issued by NHTSA and EPA in March 2020 (published on April 30, 2020 and effective after June 29, 2020), the Safer Affordable Fuel-Efficient Vehicles Rule would maintain the CAFE and CO2 standards applicable in model year 2020 for model years 2021 through 2026. The estimated CAFE and CO2 standards for model year 2020 are 43.7 mpg and 204 grams of CO2 per mile for passenger cars and 31.3 mpg and 284 grams of CO2 per mile for light trucks, projecting an overall industry average of 37 mpg, as compared to 46.7 mpg under the standards issued in 2012.

Intermodal Surface transportation Efficiency Act of 1991 (ISTEA)

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) promoted the development of inter-modal transportation systems to maximize mobility as well as address national and local interests in air quality and energy. ISTEA contained factors that Metropolitan Planning Organizations (MPOs) were to address in developing transportation plans and programs, including some energy-related factors. To meet the new ISTEA requirements, MPOs adopted explicit policies defining the social, economic, energy, and environmental values guiding transportation decisions.

The Transportation Equity Act of the 21st Century (TEA-21)

The Transportation Equity Act for the 21st Century (TEA-21) was signed into law in 1998 and builds upon the initiatives established in the ISTEA legislation, discussed above. TEA-21 authorizes highway, highway safety, transit, and other efficient surface transportation programs. TEA-21 continues the program structure established for highways and transit under ISTEA, such as flexibility in the use of funds, emphasis on measures to improve the environment, and focus on a strong planning process as the foundation of good transportation decisions. TEA-21 also provides for investment in research and its application to maximize the performance of the transportation system through, for example, deployment of Intelligent Transportation Systems, to help improve operations and management of transportation systems and vehicle safety.

2) *State*

Integrated Energy Policy Report (IEPR)

Senate Bill 1389 requires the California Energy Commission (CEC) to prepare a biennial integrated energy policy report that assesses major energy trends and issues facing the State's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the state's economy; and protect public health and safety. The Energy Commission prepares these assessments and associated

policy recommendations every two years, with updates in alternate years, as part of the Integrated Energy Policy Report.

The 2019 Integrated Energy Policy Report (2019 IEPR) was adopted February 20, 2020, and continues to work towards improving electricity, natural gas, and transportation fuel energy use in California. The 2019 IEPR focuses on a variety of topics such as decarbonizing buildings, integrating renewables, energy efficiency, energy equity, integrating renewable energy, updates on Southern California electricity reliability, climate adaptation activities for the energy sector, natural gas assessment, transportation energy demand forecast, and the California Energy Demand Forecast.

The 2020 IEPR was adopted March 23, 2021 and identifies actions the state and others can take to ensure a clean. Affordable, and reliable energy system. In 2020, the IEPR focuses on California's transportation future and the transition to zero-emission vehicles, examines microgrids, lessons learned form a decade of state-supported research, and stakeholder feedback on the potential of microgrids to contribute to a lean and resilient energy system; and reports on California's energy demand outlook, updated to reflect the global pandemic and help plan for a growth in zero-emission plug in electric vehicles.

State of California Energy Plan

The CEC is responsible for preparing the State Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The Plan calls for the state to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators and encouragement of urban designs that reduce vehicle miles traveled and accommodate pedestrian and bicycle access.

California Building Standards Code (Title 24)

California Building Energy Efficiency Standards (Title 24, Part 6)

The California Building Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations, Title 24, Part 6) were adopted to ensure that building construction and system design and installation achieve energy efficiency and preserve outdoor and indoor environmental quality. The current California Building Energy Efficiency Standards (Title 24 standards) are the 2019 Title 24 standards, which became effective on January 1, 2020. The 2019 Title 24 standards include efficiency improvements to the lighting and efficiency improvements to the non-residential standards include alignment with the American Society of Heating and Air-Conditioning Engineers.

All buildings for which an application for a building permit is submitted on or after January 1, 2020 must follow the 2019 standards. The 2016 residential standards were estimated to be approximately 28 percent more efficient than the 2013 standards, whereas the 2019 residential standards are estimated to be approximately 7 percent more efficient than the 2016 standards. Furthermore, once rooftop solar electricity generation is factored in, 2019 residential standards are estimated to be approximately 53 percent more efficient than the 2016 standards. Under the 2019 standards, nonresidential buildings are estimated to be approximately 30 percent more efficient than the 2016 standards. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases greenhouse gas emissions.

California Building Energy Efficiency Standards (Title 24, Part 11)

The 2019 California Green Building Standards Code (California Code of Regulations, Title 24, Part 11), commonly referred to as the CALGreen Code, went into effect on January 1, 2020. The 2019 CALGreen Code includes mandatory measures for non-residential development related to site development; energy efficiency; water efficiency and conservation; material conservation and resource efficiency; and environmental quality.

The Department of Housing and Community Development (HCD) updated CALGreen through the 2019 Triennial Code Adoption Cycle. HCD modified the best management practices for stormwater pollution prevention adding Section 5.106.2; added sections 5.106.4.1.3 and 5.106.4.1.5 in regard to bicycle parking; amended section 5.106.5.3.5 allowing future charging spaces to qualify as designated parking for clean air vehicles; updated section 5.303.3.3 in regard to showerhead flow rates; amended section 5.304.1 for outdoor potable water use in landscape areas and repealed sections 5.304.2 and 5.304.3; and updated Section 5.504.5.3 in regard to the use of MERV filters in mechanically ventilated buildings.

Senate Bill 350

Senate Bill 350 (SB 350) was signed into law October 7, 2015, SB 350 increases California's renewable electricity procurement goal from 33 percent by 2020 to 50 percent by 2030. This will increase the use of Renewables Portfolio Standard (RPS) eligible resources, including solar, wind, biomass, geothermal, and others. In addition, SB 350 requires the state to double statewide energy efficiency savings in electricity and natural gas end uses by 2030. To help ensure these goals are met and the greenhouse gas emission reductions are realized, large utilities will be required to develop and submit Integrated Resource Plans (IRPs). These IRPs will detail how each entity will meet their customers resource needs, reduce greenhouse gas emissions and ramp up the deployment of clean energy resources.

Assembly Bill 32

In 2006 the California State Legislature adopted Assembly Bill 32 (AB 32), the California Global Warming Solutions Act of 2006. AB 32 requires CARB, to adopt rules and regulations that would achieve GHG emissions equivalent to statewide levels in 1990 by 2020 through an enforceable statewide emission cap which will be phased in starting in 2012. Emission reductions shall include carbon sequestration projects that would remove carbon from the atmosphere and best management practices that are technologically feasible and cost effective.

Assembly Bill 1493/Pavley Regulations

California Assembly Bill 1493 enacted on July 22, 2002, required CARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. In 2005, the CARB submitted a "waiver" request to the EPA from a portion of the federal Clean Air Act in order to allow the State to set more stringent tailpipe emission standards for CO2 and other GHG emissions from passenger vehicles and light duty trucks. On December 19, 2007 the EPA announced that it denied the "waiver" request. On January 21, 2009, CARB submitted a letter to the EPA administrator regarding the State's request to reconsider the waiver denial. The EPA approved the waiver on June 30, 2009.

Executive Order S-1-07/Low Carbon Fuel Standard

Executive Order S-1-07 was issued in 2007 and proclaims that the transportation sector is the main source of GHG emissions in the State, since it generates more than 40 percent of the State's GHG emissions. It establishes a goal to reduce the carbon intensity of transportation fuels sold in the State by at least ten percent by 2020. This Order also directs CARB to determine whether this Low Carbon Fuel Standard (LCFS) could be adopted as a discrete early-action measure as part of the effort to meet the mandates in AB 32.

On April 23, 2009 CARB approved the proposed regulation to implement the low carbon fuel standard and began implementation on January 1, 2011. The low carbon fuel standard is anticipated to reduce GHG emissions by about 16 MMT per year by 2020. CARB approved some amendments to the LCFS in December 2011, which were implemented on January 1, 2013. In September 2015, the Board approved the re-adoption of the LCFS, which became effective on January 1, 2016, to address procedural deficiencies in the way the original regulation was adopted. In 2018, the Board approved amendments to the regulation, which included strengthening and smoothing the carbon intensity benchmarks through 2030 in-line with California's 2030 GHG emission reduction target enacted through SB 32, adding new crediting opportunities to promote zero emission vehicle adoption, alternative jet fuel, carbon capture and sequestration, and advanced technologies to achieve deep decarbonization in the transportation sector.

The LCFS is designed to encourage the use of cleaner low-carbon transportation fuels in California, encourage the production of those fuels, and therefore, reduce GHG emissions and decrease petroleum dependence in the transportation sector. Separate standards are established for gasoline and diesel fuels and the alternative fuels that can replace each. The standards are “back-loaded”, with more reductions required in the last five years, than during the first five years. This schedule allows for the development of advanced fuels that are lower in carbon than today’s fuels and the market penetration of plug-in hybrid electric vehicles, battery electric vehicles, fuel cell vehicles, and flexible fuel vehicles. It is anticipated that compliance with the low carbon fuel standard will be based on a combination of both lower carbon fuels and more efficient vehicles.

Reformulated gasoline mixed with corn-derived ethanol at ten percent by volume and low sulfur diesel fuel represent the baseline fuels. Lower carbon fuels may be ethanol, biodiesel, renewable diesel, or blends of these fuels with gasoline or diesel as appropriate. Compressed natural gas and liquefied natural gas also may be low carbon fuels. Hydrogen and electricity, when used in fuel cells or electric vehicles are also considered as low carbon fuels for the low carbon fuel standard.

Executive Order N-79-20.

Executive Order N-79-20 was signed into law on September 23, 2020 and mandates 100 percent of in-state sales of new passenger cars and trucks be zero-emission by 2035; 100 percent of medium- and heavy-duty vehicles in the state be zero-emission vehicles by 2045 for all operations where feasible and by 2035 for drayage trucks; and to transition to 100 percent zero-emission off-road vehicles and equipment by 2035 where feasible.

California Air Resources Board

CARB’s Advanced Clean Cars Program

Closely associated with the Pavley regulations, the Advanced Clean Cars emissions control program was approved by CARB in 2012. The program combines the control of smog, soot, and GHGs with requirements for greater numbers of zero-emission vehicles for model years 2015–2025. The components of the Advanced Clean Cars program include the Low-Emission Vehicle (LEV) regulations that reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles, and the Zero-Emission Vehicle (ZEV) regulation, which requires manufacturers to produce an increasing number of pure ZEVs (meaning battery electric and fuel cell electric vehicles), with provisions to also produce plug-in hybrid electric vehicles (PHEV) in the 2018 through 2025 model years.

Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling

The Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling (Title 13, California Code of Regulations, Division 3, Chapter 10, Section 2435) was adopted to reduce public exposure to diesel particulate matter and other air contaminants by limiting the idling of diesel-fueled commercial motor vehicles. This section applies to diesel-fueled commercial motor vehicles with gross vehicular weight ratings of greater than 10,000 pounds that are or must be licensed for operation on highways. Reducing idling of diesel-fueled commercial motor vehicles reduces the amount of petroleum-based fuel used by the vehicle.

Regulation to Reduce Emissions of Diesel Particulate Matter, Oxides of Nitrogen, and other Criteria Pollutants, form In-Use Heavy-Duty Diesel-Fueled Vehicles

The Regulation to Reduce Emissions of Diesel Particulate Matter, Oxides of Nitrogen and other Criteria Pollutants, from In-Use Heavy-Duty Diesel-Fueled Vehicles (Title 13, California Code of Regulations, Division 3, Chapter 1, Section 2025) was adopted to reduce emissions of diesel particulate matter, oxides of nitrogen (NOX) and other criteria pollutants from in-use diesel-fueled vehicles. This regulation is phased, with full implementation by 2023. The regulation aims to reduce emissions by requiring the installation of diesel soot filters and encouraging the retirement, replacement, or repower of older, dirtier engines with newer emission-controlled models. The newer emission controlled models would use petroleum-based fuel in a more efficient manner.

Sustainable Communities Strategy

The Sustainable Communities and Climate Protection Act of 2008, or Senate Bill 375 (SB 375), coordinates land use planning, regional transportation plans, and funding priorities to help California meet the GHG reduction mandates established in AB 32.

Senate Bill 375 (SB 375) was adopted September 2008 and aligns regional transportation planning efforts, regional GHG emission reduction targets, and land use and housing allocation. SB 375 requires Metropolitan Planning Organizations (MPO) to adopt a sustainable communities strategy (SCS) or alternate planning strategy (APS) that will prescribe land use allocation in that MPOs Regional Transportation Plan (RTP). CARB, in consultation with each MPO, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every eight years but can be updated every four years if advancements in emissions technologies affect the reduction strategies to achieve the targets. CARB is also charged with reviewing each MPO's sustainable communities strategy or alternate planning strategy for consistency with its assigned targets.

4. ENVIRONMENTAL IMPACTS AND MITIGATIONS

A. Threshold of Significance

Appendix G of the CEQA Guidelines provides thresholds address impacts related to GHG emissions. Specifically, the Guidelines state that the proposed project may have an adverse significant GHG emissions impact if it would:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

In addition, in compliance with Appendix G of the State CEQA Guidelines, the proposed project may have an adverse significant impact related to energy use if the project would:

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; or

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

B. Project Impacts and Mitigation Measures

Impact F-1: Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Impact Analysis:

Future development that would be accommodated under the Housing Element would contribute to global climate change through direct and indirect emissions of GHG from land uses.

The emissions associated with the existing development, year 2021, at the opportunity sites identified for the Housing Element are provided below, for informational purposes, in Table IV.F-6.

Table IV.F.6
Existing Year 2021 Greenhouse Gas Emissions

Category	Greenhouse Gas Emissions (Metric Tons/Year)[1]					
	Bio-CO2	NonBio-CO_2	CO_2	CH_4	N_2O	CO_2e
Area Sources[2]	0.00	13.05	13.05	0.00	0.00	13.14
Energy Usage[3]	0.00	96.13	96.13	0.00	0.00	96.66
Mobile Sources[4]	0.00	486.24	486.24	0.04	0.02	494.03
Solid Waste[5]	6.27	0.00	6.27	0.37	0.00	15.53
Water[6]	1.17	13.11	14.28	0.12	0.00	18.18
Total Emissions	7.44	608.53	615.97	0.53	0.03	**637.56**
MTCO2e/SP[7]						**3.98**
SCAQMD Draft Service Population Threshold						**4**
Exceeds Threshold?						**No**

Notes:
[1] Source: CalEEMod Version 2020.4.0
[2] Area sources consist of GHG emissions from consumer products, architectural coatings, and landscape equipment.
[3] Energy usage consist of GHG emissions from electricity and natural gas usage.
[4] Mobile sources consist of GHG emissions from vehicles.
[5] Solid waste includes the CO_2 and CH_4 emissions created from the solid waste placed in landfills.
[6] Water includes GHG emissions from electricity used for transport of water and processing of wastewater.
[7] Service population based on the population provided in the CalEEmod output of 160 residents.

Housing Element Buildout

The GHG emissions associated with the existing land uses (year 2029), buildout under the designations of the General Plan Update (year 2029), and buildout under the designations within the Housing Element (year 2029) are provided in Table IV.F-7. The net increase in GHG emissions is based on the difference between existing land uses and the land uses associated with the future development accommodated under the Housing Element and the difference between the land uses of the buildout of the General Plan Update and the future development accommodated under the Housing Element.

Table IV.F-7
Buildout Year 2029 Greenhouse Gas Emissions

Category	Greenhouse Gas Emissions (Metric Tons/Year)[1]					
	Bio-CO2	NonBio-CO_2	CO_2	CH_4	N_2O	CO_2e
Existing						
Area Sources[2]	0.00	13.05	13.05	0.00	0.00	13.14
Energy Usage[3]	0.00	96.13	96.13	0.00	0.00	96.66
Mobile Sources[4]	0.00	407.84	407.84	0.03	0.02	413.76
Solid Waste[5]	6.27	0.00	6.27	0.37	0.00	15.53
Water[6]	1.17	13.11	14.28	0.12	0.00	18.18
Total Emissions	7.44	530.13	537.57	0.53	0.02	**557.29**
MTCO2e/SP[7]						**3.48**
SCAQMD Draft Service Population Threshold						**4.1**
Exceeds Threshold?						**No**
2015 General Plan Update						
Area Sources[2]	0.00	37.04	37.04	0.00	0.00	37.31
Energy Usage[3]	0.00	339.30	339.30	0.02	0.00	341.18
Mobile Sources[4]	0.00	1,064.01	1,064.01	0.07	0.04	1,079.22
Solid Waste[5]	25.84	0.00	25.84	1.53	0.00	64.02
Water[6]	3.30	36.94	40.24	0.34	0.01	51.27
Total Emissions	29.14	1,477.29	1,506.43	1.96	0.06	**1,573.00**
MTCO2e/SP[7]						**3.46**
SCAQMD Draft Service Population Threshold						**4.1**
Exceeds Threshold?						**No**
Proposed Housing Element						
Area Sources[2]	0.00	78.04	78.04	0.01	0.00	78.61
Energy Usage[3]	0.00	605.80	605.80	0.03	0.01	609.18
Mobile Sources[4]	0.00	2,058.23	2,058.23	0.15	0.09	2,089.03
Solid Waste[5]	41.23	0.00	41.23	2.44	0.00	102.15
Water[6]	6.92	77.51	84.44	0.72	0.02	107.62
Total Emissions	48.16	2,819.59	2,867.75	3.34	0.12	**2,986.59**
MTCO2e/SP[7]						**3.12**
SCAQMD Draft Service Population Threshold						**4.1**
Exceeds Threshold?						**No**
Net Increase of Proposed Housing Element compared to Existing uses						**-0.37**
SCAQMD Draft Service Population Threshold						**4.1**
Exceeds Threshold?						**No**
Net Increase of Proposed Housing Element compared to 2015 General Plan Update uses						**-0.35**
SCAQMD Draft Service Population Threshold						**4.1**
Exceeds Threshold?						**No**

Notes:
[1] Source: CalEEMod Version 2020.4.0. Based on Year 2029 emission rates.
[2] Area sources consist of GHG emissions from consumer products, architectural coatings, and landscape equipment.
[3] Energy usage consist of GHG emissions from electricity and natural gas usage.
[4] Mobile sources consist of GHG emissions from vehicles.
[5] Solid waste includes the CO_2 and CH_4 emissions created from the solid waste placed in landfills.
[6] Water includes GHG emissions from electricity used for transport of water and processing of wastewater.
[7] Service population based on the population provided in the CalEEmod output of 160 residents for the existing uses, 454 for the GP Update 2015 uses, and 958 residents for the uses associated with the Housing Element.

As shown in Table IV.F-7, the operational emissions associated with the future development of the housing element (without credit for any reductions from sustainable design and/or regulatory requirements) are 2,986.59 metric tons of CO_2e per year or 3.12 metric tons of CO_2e per service population per year. Furthermore, the operational emissions associated with the existing uses (without credit for any reductions from sustainable design and/or regulatory requirements) are 557.29 metric tons of CO_2e per year or 3.48 metric tons of CO_2e per service population per year and for the General Plan Update are 1,573 metric tons of CO_2e per year or 3.46 metric tons of CO_2e per service population per year. Therefore, as shown in Table IV.F.7, the net change in emissions is a reduction of approximately 0.37 metric tons of CO_2e per service population per year from the Existing uses and a reduction of approximately 0.35 metric tons of CO_2e per service population per year from the General Plan Update uses.

The emissions associated with the future development of the Housing Element would not exceed the SCAQMD draft 2035 threshold 4.1 $MTCO_2e$ per service population per year for plans. Therefore, the future development associated with the City's Housing Element would not create a significant cumulative impact to global climate change as it would result in a reduction in emissions per service population from both the Existing and General Plan Update scenarios.

Comparison of Significance to the General Plan EIR

The General Plan EIR determined that implementation of the General Plan Update would result in a net decrease of GHG emissions compared to existing conditions and would not have a significant impact on the environment. As discussed above, the future development associated with the Housing Element would provide for a net decrease in per service population emissions when compared to both the existing conditions and the buildout associated with the General Plan Update and would not result in significant impacts. Therefore, the significance level, in regards to GHG emissions, associated with the future development of the Housing Element would not result in increased significance from that which was previously identified in the General Plan EIR and is considered less than significant.

Mitigation Measures:

None required.

Impact F-2: Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Impact Analysis:

The following discusses the consistency of the future development accommodated under the Housing Element to the CARB Scoping Plan, SCAG's Connect SoCal (2020–2045 Regional Transportation Plan/Sustainable Communities Strategy), and the City of Sierra Madre's Energy Action Plan.

CARB Scoping Plan Consistency

The ARB Board approved a Climate Change Scoping Plan in December 2008. The Scoping Plan outlines the State's strategy to achieve the 2020 greenhouse gas emissions limit. The Scoping Plan "proposes a comprehensive set of actions designed to reduce overall greenhouse gas emissions in California, improve our environment, reduce our dependence on oil, diversify our energy sources, save energy, create new jobs, and enhance public health" (California Air Resources Board 2008). The measures in the Scoping Plan have been in place since 2012.

This Scoping Plan calls for an "ambitious but achievable" reduction in California's greenhouse gas emissions, cutting approximately 30 percent from business-as-usual emission levels projected for 2020, or about 10 percent from today's levels. On a per-capita basis, that means reducing annual emissions of 14 tons of carbon dioxide for every man, woman and child in California down to about 10 tons per person by 2020.

In May 2014, CARB released its *First Update to the Climate Change Scoping Plan* (CARB 2014). This *Update* identifies the next steps for California's leadership on climate change. While California continues on its path to meet the near-term 2020 greenhouse gas limit, it must also set a clear path toward long-term, deep GHG emission reductions. This report highlights California's success to date in reducing its GHG emissions and lays the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050.

In November 2017, CARB release the 2017 Scoping Plan. This Scoping Plan incorporates, coordinates, and leverages many existing and ongoing efforts and identifies new policies and actions to accomplish the State's climate goals, and includes a description of a suite of specific actions to meet the State's 2030 GHG limit. In addition, Chapter 4 provides a broader description of the many actions and proposals being explored across the sectors, including the natural resources sector, to achieve the State's mid and long-term climate goals.

Guided by legislative direction, the actions identified in the 2017 Scoping Plan reduce overall GHG emissions in California and deliver policy signals that will continue to drive investment and certainty in a low carbon economy. The 2017 Scoping Plan builds upon the successful framework established by the Initial Scoping Plan and First Update, while identifying new, technologically feasible, and cost-effective strategies to ensure that California meets its GHG reduction targets in a way that promotes and rewards innovation, continues to foster economic growth, and delivers improvements to the environment and public health, including in disadvantaged communities. The Plan includes policies to require direct GHG reductions at some of the State's largest stationary sources and mobile sources. These policies include the use of lower GHG fuels, efficiency regulations, and the Cap-and Trade Program, which constrains and reduces emissions at covered sources.

As the latest, 2017 Scoping Plan builds upon previous versions, project consistency with applicable strategies of both the 2008 and 2017 Plan are assessed in Table IV.F-8. As shown in Table IV.F-8, the future development accommodated in the Housing Element is consistent with the applicable strategies of the CARB Scoping Plan and would result in a less than significant impact.

Table IV.F-8
Consistency with CARB 2008 Scoping Plan Policies and Measures

2008 Scoping Plan Measures to Reduce Greenhouse Gas Emissions	Project Compliance with Measure
California Light-Duty Vehicle Greenhouse Gas Standards – Implement adopted standards and planned second phase of the program. Align zero-emission vehicle, alternative and renewable fuel and vehicle technology programs with long-term climate change goals.	Consistent. These are CARB enforced standards; vehicles that access the future development sites of the Housing Element that are required to comply with the standards will comply with the strategy.

Table IV.F-8
Consistency with CARB 2008 Scoping Plan Policies and Measures

2008 Scoping Plan Measures to Reduce Greenhouse Gas Emissions	Project Compliance with Measure
Energy Efficiency – Maximize energy efficiency building and appliance standards; pursue additional efficiency including new technologies, policy, and implementation mechanisms. Pursue comparable investment in energy efficiency from all retail providers of electricity in California.	Consistent. The future development projects accommodated under the Housing Element will be required to comply with the current Title 24 standards.
Low Carbon Fuel Standard – Develop and adopt the Low Carbon Fuel Standard.	Consistent. These are CARB enforced standards; vehicles that access the future development sites of the Housing Element that are required to comply with the standards will comply with the strategy.
Vehicle Efficiency Measures – Implement light-duty vehicle efficiency measures.	Consistent. These are CARB enforced standards; vehicles that access the future development sites of the Housing Element that are required to comply with the standards will comply with the strategy.
Medium/Heavy-Duty Vehicles – Adopt medium and heavy-duty vehicle efficiency measures.	Consistent. These are CARB enforced standards; vehicles that access the future development sites of the Housing Element that are required to comply with the standards will comply with the strategy.
Green Building Strategy – Expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings.	Consistent. The California Green Building Standards Code (proposed Part 11, Title 24) was adopted as part of the California Building Standards Code in the CCR. Part 11 establishes voluntary standards, that are mandatory in the 2019 edition of the Code, on planning and design for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants. The future development accommodated in the Housing Element will be subject to these mandatory standards.
High Global Warming Potential Gases – Adopt measures to reduce high global warming potential gases.	Consistent. CARB identified five measures that reduce HFC emissions from vehicular and commercial refrigeration systems; vehicles that access the future development sites of the Housing Element that are required to comply with the measures will comply with the strategy.

Table IV.F-8
Consistency with CARB 2008 Scoping Plan Policies and Measures

2008 Scoping Plan Measures to Reduce Greenhouse Gas Emissions	**Project Compliance with Measure**
Recycling and Waste – Reduce methane emissions at landfills. Increase waste diversion, composting, and commercial recycling. Move toward zero-waste.	Consistent. The state is currently developing a regulation to reduce methane emissions from municipal solid waste landfills. The future development of the Housing Element will be required to comply with City programs and regulations related to solid waste, which comply, with the 75 percent reduction required by 2020 per AB 341.
Water – Continue efficiency programs and use cleaner energy sources to move and treat water.	Consistent. The future development projects accommodated under the Housing Element will be required to comply with all applicable City ordinances and CAL Green requirements.
2017 Scoping Plan Recommended Actions to Reduce Greenhouse Gas Emissions	Project Compliance with Recommended Action
Implement Mobile Source Strategy: Further increase GHG stringency on all light-duty vehicles beyond existing Advanced Clean Car regulations.	Consistent. These are CARB enforced standards; vehicles that access the future development sites of the Housing Element that are required to comply with the standards will comply with the strategy.
Implement Mobile Source Strategy: At least 1.5 million zero emission and plug-in hybrid light-duty electric vehicles by 2025 and at least 4.2 million zero emission and plug-in hybrid light-duty electric vehicles by 2030.	Consistent. These are CARB enforced standards; vehicles that access the future development sites of the Housing Element that are required to comply with the standards will comply with the strategy.
Implement Mobile Source Strategy: Innovative Clean Transit: Transition to a suite of to-be-determined innovative clean transit options. Assumed 20 percent of new urban buses purchased beginning in 2018 will be zero emission buses with the penetration of zero-emission technology ramped up to 100 percent of new sales in 2030. Also, new natural gas buses, starting in 2018, and diesel buses, starting in 2020, meet the optional heavy-duty low-NOX standard.	Consistent. These are CARB enforced standards; vehicles that access the future development sites of the Housing Element that are required to comply with the standards will comply with the strategy.

Table IV.F-8
Consistency with CARB 2008 Scoping Plan Policies and Measures

2008 Scoping Plan Measures to Reduce Greenhouse Gas Emissions	Project Compliance with Measure
Implement Mobile Source Strategy: Last Mile Delivery: New regulation that would result in the use of low NOX or cleaner engines and the deployment of increasing numbers of zero-emission trucks primarily for class 3-7 last mile delivery trucks in California. This measure assumes ZEVs comprise 2.5 percent of new Class 3–7 truck sales in local fleets starting in 2020, increasing to 10 percent in 2025 and remaining flat through 2030.	Consistent. These are CARB enforced standards; vehicles that access the future development sites of the Housing Element that are required to comply with the standards will comply with the strategy.
Implement SB 350 by 2030: Establish annual targets for statewide energy efficiency savings and demand reduction that will achieve a cumulative doubling of statewide energy efficiency savings in electricity and natural gas end uses by 2030.	Consistent. The future development projects accommodated under the Housing Element will be required to comply with the current Title 24 standards.
By 2019, develop regulations and programs to support organic waste landfill reduction goals in the SLCP and SB 1383.	Consistent. The future development of the Housing Element will be required to comply with City programs and regulations related to solid waste, which comply, with the 75 percent reduction required by 2020 per AB 341.
Source: CARB Scoping Plan (2008 and 2017)	

Executive Orders S-03-05 and B-30-15

The future development accommodated under the Housing Element is consistent with the State's Executive Orders S-3-05 and B-30-15, which are orders from the State's Executive Branch for the purpose of reducing GHG emissions. These strategies call for developing more efficient land-use patterns to match population increases, workforce, and socioeconomic needs for the full spectrum of the population. The project includes elements of smart land use as it is the re-zoning and re-designation of sites within the City of Sierra Madre in order to match forecasted population growth within the City. Furthermore, the sites identified for future development within the Housing Element are well-served by transportation infrastructure.

Although the emissions levels of the future development accommodated under the Housing Element in 2050 cannot be reliably quantified, statewide efforts are underway to facilitate the State's achievement of that goal and it is reasonable to expect the emissions profile of the proposed uses would only decline as the regulatory initiatives identified by ARB in the First Update are implemented, and other technological innovations occur. Stated differently, the total emissions associated with the future development accommodated under the Housing Element presented in this analysis represents the maximum emissions inventory for these site's as the California's emissions sources are being regulated

(and foreseeably expected to continue to be regulated in the future) in furtherance of the State's environmental policy objectives. As such, given the reasonably anticipated decline in emissions once fully constructed and operational, the future development accommodated under the Housing Element is consistent with the Executive Order's horizon-year goal.

Many of the emission reduction strategies recommended by ARB would serve to reduce the project's emissions level to the extent applicable by law and help lay the foundation "…for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050," as called for in ARB's First Update to the AB 32 Scoping Plan. As such, the project's emissions trajectory is expected to follow a declining trend, consistent with the 2030 and 2050 targets and Executive Order S-3-05 and B-30-15.

SCAG's RTP/SCS

SCAG's Regional Council approved and fully adopted the Connect SoCal (2020–2045 Regional Transportation Plan/Sustainable Communities Strategy) and the addendum to the Connect SoCal Program Environmental Impact Report in September 2020. Connect SoCal is a long-range visioning plan that builds upon and expands land use and transportation strategies established over several planning cycles to increase mobility options and achieve a more sustainable growth pattern. Connect SoCal is supported by a combination of transportation and land use strategies that help the region achieve state greenhouse gas emission reduction goals and federal Clean Air Act requirements, preserve open space areas, improve public health and roadway safety, support our vital goods movement industry and utilize resources more efficiently. By integrating the Forecasted Development Pattern with a suite of financially constrained transportation investments, Connect SoCal can reach the regional target of reducing greenhouse gases, or GHGs, from autos and light-duty trucks by 8 percent per capita by 2020, and 19 percent by 2035 (compared to 2005 levels).

The proposed project is that of the City of Sierra Madre Housing Element and requires amending the City's General Plan designations on proposed Housing Element opportunity sites, which requires revisions to the Land Use Element and Land Use Map of the City of Sierra Madre General Plan and changes to the City's Zoning Code and Zoning Map. The increased density of residential units accommodated under the Housing Element is in response to SCAG developing a Regional Housing Needs Allocation (RHNA) for the City of Sierra Madre for the City's 2021-2029 Housing Element planning period. As the City of Sierra Madre does not currently have an adequate number of sites with zoning in place to meet the RHNA requirements, the City identified possible housing sites to address Sierra Madre's RHNA obligation. These identified sites are the future development analyzed in this report and identified in the Housing Element.

The future sites for rezoning identified in the Housing Element are all located in developed areas with existing roadway networks and near existing transit stops. Furthermore, the sites are located in close proximity to other existing residential, commercial, and institutional uses surrounding. Therefore, as the increased residential density of the future development of the Housing Element is in response to SCAG forecasts and the future development is located in developed areas in close proximity to existing transportation networks, Housing Element is considered to be consistent with the measures identified in the SCAG RTP/SCS.

City of Sierra Madre Energy Action Plan

The City's Energy Action Plan focuses on reducing GHG emissions through reducing citywide and municipal electricity demand. The Housing Element's consistency with the goals and polices of the City's Energy Action Plan is provided in Table IV.F-9. As shown in Table IV-F.9, the Housing Element would be consistent

with the Energy Action Plan. Therefore, the future development of the Housing Element would not be inconsistent with the City's Energy Action Plan.

Table IV.F-9
Consistency with EAP Policies and Measures

EAP Goal	EAP Policies	Compliance with Goals
Goal 1: Achieve maximum efficiency of the City's aging housing stock while reducing energy costs and enhancing the quality of historic and unique residences.	Policy 1.1: Promote household energy conservation by residents in existing structures through education and outreach.	Not Applicable: The Housing Element is the re-zoning and designation of sites to higher density residential; therefore, if development per the Housing Element occurs at these site, would not fall under the policies in under Goal 1 of the Energy Action Plan as there would be no existing structures to upgrade/retrofit.
	Policy 1.2: Encourage residential upgrades to more energy-efficient, cost-saving appliances and equipment.	
	Policy 1.3: Protect and preserve the City's mature housing stock by encouraging voluntary residential retrofits.	
Goal 2: Energy efficiency will strengthen the operational efficiency, quality, and viability of local businesses and the City's village core.	Policy 2.1: Promote commercial energy conservation by businesses in existing structures through education and outreach.	Not Applicable: The Housing Element is the re-zoning and designation of sites to higher density residential. It does not include commercial or business related uses.
	Policy 2.2: Support the use of energy-efficient appliances and equipment in leased and owner-occupied businesses.	
	Policy 2.3: Preserve and enhance the downtown business core by facilitating retrofits and energy efficiency improvements within the non-residential building stock.	
	Policy 2.4: Encourage energy efficiency benchmarking as a tool to help businesses and assess and identify opportunities to improve business energy performance.	

Table IV.F-9
Consistency with EAP Policies and Measures

EAP Goal	EAP Policies	Compliance with Goals
Goal 3: All new development and significant remodels will have a net zero community-wide energy demand by 2020.	Policy 3.1: Maximize the energy efficiency of new buildings through a community-wide green building framework.	Consistent: The future development associated with the Housing Element would be required to comply with all City regulations from the City's General Plan and Municipal Code including those applicable to energy efficiency. Furthermore, all future development would be subject to the California Green Building Standards Code (proposed Part 11, Title 24) which was adopted as part of the California Building Standards Code in the CCR. Part 11 establishes voluntary standards, that are mandatory in the 2019 edition of the Code, on planning and design for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants. The future development associated with the Housing Element will be subject to these mandatory standards.
	Policy 3.2: Encourage the use of smart-grid-integrated and energy star appliances in new development.	
Goal 4: Integrate energy efficiency in the City's regulatory and policy framework.	Policy 4.1: Encourage energy efficiency through the development standards, permitting, and plan review processes.	Not Applicable: This goal requires the City to add additional regulations and policies regarding energy efficiency. The proposed project is an update to the Housing Element that includes re-zoning and designation of land use sites to higher density residential and would not include additional energy efficiency policies. However, the future development associated with the Housing Element would be required to comply with any applicable City energy efficient policies as identified in the City's General Plan and/or Municipal Code.
	Policy 4.2: Enhance the City's historic preservation process to facilitate energy efficiency in significant historic properties while maintaining building quality and the unique nature of historic districts.	
Goal 5: Enhance the quaint, tree-lined, and pedestrian-scale nature of existing neighborhoods.	Policy 5.1: Reduce residential electricity demand by promoting voluntary plantings of on-site trees that shade air-conditioned structures.	Consistent: The future development associated with the Housing Element would be required to comply with all City regulations from the City's

Table IV.F-9
Consistency with EAP Policies and Measures

EAP Goal	EAP Policies	Compliance with Goals
	Policy 5.2: Reduce citywide electricity demands with nonresidential and municipal shade trees.	General Plan and Municipal Code including those applicable to the number of trees to be planted for residential uses and the installation of cool roofs.
	Policy 5.3: Reduce electricity demand by encouraging the installation of cool roofs on residential and nonresidential buildings.	
Goal 6: Integrate water-related energy conservation and efficiency practices in new and existing development.	Policy 6.1: Reduce per capita water demand by 30% by 2020 from 262 gallons per day to 183 gallons per day to conserve energy used to pump, treat, and convey water.	Not Applicable: The Housing Element is the re-zoning and designation of sites to higher density residential. It does not include City facilities.
Goal 7: Reduce municipal electricity use at City facilities 10% below baseline 2010 levels by 2020.	Policy 7.1: Model the benefits of cost-effective energy management practices.	
	Policy 7.2: Maximize the energy efficiency of existing building envelopes.	
	Policy 7.3: Identify long-term options to replace the City's heating, ventilation, and air conditioning (HVAC) equipment with models that yield lower operational costs.	
	Policy 7.4: Maximize the efficiency of equipment in City facilities to reduce maintenance and energy costs and support operational efficiencies.	
	Policy 7.5: Continue to monitor opportunities to reduce energy use for motors and pumps, including the water service facility.	

Table IV.F-9
Consistency with EAP Policies and Measures

EAP Goal	EAP Policies	Compliance with Goals
	Policy 7.6: Create a municipal financial system that supports energy efficiency.	
	Policy 7.7: Enhance outdoor lighting to maintain Sierra Madre's traditional village feel while reducing municipal maintenance and utility costs.	
	Policy 7.8: Work with the SGVCOG and regional partners for creation of a regional energy management position to track energy use at City facilities, identify opportunities for efficiencies and cost savings, and implement energy efficiency projects.	
Source: City of Sierra Madre Energy Action Plan, 2012.		

Comparison of Significance to the General Plan EIR

The 2015 General Plan EIR determined that growth of the City under the General Plan Update would be consistent with SCAG's 2012 Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS) and the City's Energy Action Plan. However, the General Plan EIR determined that growth would not meet the GHG emissions reduction targets of Executive Orders B-30-15 and S-03-05 without additional federal, state, and local GHG reduction measures and plans. Therefore, the General Plan Update was found to conflict with Executive Orders B-30-15 and S-03-05 and impacts would be significant.

As discussed above, the future development associated with the Housing Element would be consistent with applicable measures of the CARB Scoping Plan, SCAG's SoCal (2020–2045 Regional Transportation Plan/Sustainable Communities Strategy), and the City's Energy Action Plan. Furthermore, as the emissions levels of the future development accommodated under the Housing Element in 2050 cannot be reliably quantified and statewide efforts are underway to facilitate the State's achievement of that goal and it is reasonable to expect that the emissions profile of the proposed uses would only decline as the regulatory initiatives identified by ARB in the First Update are implemented, and other technological innovations occur. Therefore, the project was found to be consistent with Executive Orders B-30-15 and S-03-05. As the GHG emissions associated with the future development of the Housing Element would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases, impacts are considered less than significant and would not result in increased significance levels.

Mitigation Measures:

None required.

Impact F-3: Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Impact Analysis:

Construction Energy Demand

Construction activities associated with the future development of the Housing Element would occur over buildout of the Housing Plan, which includes years 2021 through 2029. Information regarding each specific development project accommodated under the Housing Element update (such as construction timeline, earthworks information, amount and type of construction equipment etc.) would be needed in order to quantitatively analyze the energy impacts associated with construction activity. Therefore, the construction related energy demands of the future development accommodated under the Housing Element e have been discussed below in a qualitative manner.

Construction equipment used during the construction phase of each individual project site would be required to conform to CARB regulations and California emissions standards and is evidence of related fuel efficiencies. The sites are that of residential development and would be anticipated to require the typical use of energy resources. Due to the residential nature of the future development to be accommodated under the Housing Element, there are no unusual project characteristics or construction processes anticipated that would require the use of equipment that would be more energy intensive than is used for comparable activities; or equipment that would not conform to current emissions standards (and related fuel efficiencies). Equipment employed during construction of the individual construction projects would therefore not result in inefficient wasteful, or unnecessary consumption of fuel.

CARB has adopted the Airborne Toxic Control Measure to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to diesel particulate matter and other Toxic Air Contaminants. Additionally, as required by California Code of Regulations Title 13, Motor Vehicles, section 2449(d)(3) Idling, limits idling times of construction vehicles to no more than five minutes, thereby minimizing or eliminating unnecessary and wasteful consumption of fuel due to unproductive idling of construction equipment. Enforcement of idling limitations is realized through periodic site inspections conducted by City building officials, and/or in response to citizen complaints. Compliance with these measures is mandatory and would result in a more efficient use of construction-related energy and would minimize or eliminate wasteful or unnecessary consumption of energy. Idling restrictions and the use of newer engines and equipment would result in less fuel combustion and energy consumption.

Furthermore, the future development accommodated under the Housing Element will be required to be designed in compliance with California's Energy Efficiency Standards and 2019 CALGreen Standards. These measures include, but are not limited to the use of water conserving plumbing, installation of bicycle racks, the use of LED lighting, and water-efficient irrigation systems. Therefore, construction activities associated with the future development of the Housing Element would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources.

Operational Energy Demand

Energy consumption in support of or related to the operations of the future development of the Housing Element would include transportation energy demands (energy consumed by employee, resident, and

patron vehicles accessing the project site) and facilities energy demands (energy consumed by building operations and site maintenance activities).

Transportation Fuel Consumption

The largest source of operational energy use would be vehicle operation of residents. The sites anticipated for redesignation in the Housing Element, and analyzed in this report, are all located in urbanized areas with existing transportation networks.

The CEQA Energy Review conducted by MD Acoustics (2021), as shown in Table IV.F-10, showed that, in the year 2029 (the buildout year of the Housing Element 2021-2029), an estimated 42,309 gallons of fuel would be consumed per year for the operation of the Existing scenario, 102,095 gallons of fuel would be consumed per year for the operation of the General Plan Update scenario, and 191,640 gallons of fuel would be consumed per year for the operation of the Housing Element scenario. Therefore, the future development of the Housing Element would result in net increases in fuel consumed per year of approximately 149,332 gallons in comparison to the Existing scenario and 89,549 gallons in comparison to the General Plan Update Scenario.

Table IV.F-10
Estimated Vehicle Operations Fuel Consumption

Vehicle Type	Vehicle Mix	Number of Vehicles	Average Trip (miles)[1]	Daily VMT	Average Fuel Economy (mpg)	Total Gal. per Day	Total Annual Fuel Consumption (gallons)
Existing							
Light Auto	Auto	281	6.85	1,925	36.92	52.14	19,030
Light Truck	Auto	36	6.85	247	31.16	7.91	2,889
Light Truck	Auto	102	6.85	699	30.69	22.77	8,310
Medium Truck	Auto	67	6.85	459	24.97	18.38	6,709
Light Heavy Truck	2-Axle Truck	13	6.85	89	15.58	5.72	2,086
Light Heavy Truck 10,000 lbs +	2-Axle Truck	4	6.85	27	15.97	1.72	626
Medium Heavy Truck	3-Axle Truck	6	6.85	41	10.69	3.84	1,403
Heavy Heavy Truck	4-Axle Truck	4	6.85	27	7.96	3.44	1,256
Total		528	--	3,514	21.74	115.91	--
Total Annual Fuel Consumption							**42,309**
General Plan Update							
Light Auto	Auto	619	7.47	4,624	36.92	125.24	45,713
Light Truck	Auto	78	7.47	583	31.16	18.70	6,825
Light Truck	Auto	224	7.47	1,673	30.69	54.52	19,901
Medium Truck	Auto	147	7.47	1,098	24.97	43.98	16,051
Light Heavy Truck	2-Axle Truck	28	7.47	209	15.58	13.42	4,900
Light Heavy Truck 10,000 lbs +	2-Axle Truck	8	7.47	60	15.97	3.74	1,366
Medium Heavy Truck	3-Axle Truck	14	7.47	105	10.69	9.78	3,571
Heavy Heavy Truck	4-Axle Truck	11	7.47	82	7.96	10.32	3,768

Total		1,164	--	8,434	21.74	279.71	--
Total Annual Fuel Consumption							**102,095**
Housing Element							
Light Auto	Auto	1,608	5.43	8,731	36.92	236.50	86,321
Light Truck	Auto	203	5.43	1,102	31.16	35.38	12,912
Light Truck	Auto	583	5.43	3,166	30.69	103.15	37,650
Medium Truck	Auto	383	5.43	2,080	24.97	83.29	30,400
Light Heavy Truck	2-Axle Truck	73	5.43	396	15.58	25.44	9,286
Light Heavy Truck 10,000 lbs +	2-Axle Truck	21	5.43	114	15.97	7.14	2,606
Medium Heavy Truck	3-Axle Truck	35	5.43	190	10.69	17.78	6,489
Heavy Heavy Truck	4-Axle Truck	24	5.43	130	7.96	16.37	5,976
Total		3,026	--	15,910	21.74	525.04	--
Total Annual Fuel Consumption							**191,640**
Net Increase of Proposed Housing Element compared to Existing uses							**149,332**
Net Increase of Proposed Housing Element compared to General Plan Update uses							**89,545**

Notes:
[1]The average trip mileage was based on the trip length calculations provided in the CalEEMod output in the Sierra Madre General Plan Housing Element Air Quality and Greenhouse Gas Impact Study prepared by MD Acoustics (July 14, 2021). As stated in the Air Quality and Greenhouse Gas Impact study, the total trips generated under the General Plan Update scenario were assumed based on the trip generation rate data provided for the Existing and Housing Element scenarios.

Although the fuel consumed by the future development accommodated under the Housing Element is greater than that consumed in the Existing and General Plan Update scenarios, the trip generation and VMT generated by the uses are consistent with other similar residential uses of similar scale and configuration as reflected respectively in the Institute of Transportation Engineers (ITE) Trip Generation Manual (20th Edition, 2017). That is, the future development associated with the Housing Element does not propose uses or operations that would inherently result in excessive and wasteful vehicle trips and VMT, nor associated excess and wasteful vehicle energy consumption. Furthermore, the state of California consumed approximately 4.2 billion gallons of diesel and 15.1 billion gallons of gasoline in 2015.[78, 79] Therefore, the increase in fuel consumption from the future development associated with the Housing Element is insignificant in comparison to the State's demand. Therefore, transportation energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary.

Facility Energy Demands (Electricity and Natural Gas)

Building operation and site maintenance (including landscape maintenance) would result in the consumption of electricity (provided by SCE) and natural gas (provided by Southern California Gas Company). Operation of the future development associated with the Housing Element would involve the use of energy for heating, cooling and equipment operation. These facilities would be required to comply

[78] *https://www.energy.ca.gov/data-reports/energy-almanac/transportation-energy/california-gasoline-data-facts-and-statistics*

[79] *https://www.energy.ca.gov/data-reports/energy-almanac/transportation-energy/diesel-fuel-data-facts-and-statistics*

with all applicable California Energy Efficiency Standards and 2019 CALGreen Standards.The annual natural gas and electricity demands from the CEQA Energy Review prepared for the proposed project (MD Acoustics 2021) are provided in Table IV.F-11.

Table IV.F-11
Annual Operational Energy Demand Summary[1]

Natural Gas Demand	kBTU/year
Existing	
Apartments Low Rise	888,824
Place of Worship	16,164
Total	904,988
General Plan Update	
Apartments Low Rise	1,428,470
Place of Worship	1,614
Single-Family Housing	1,758,950
Total	3,189,034
Housing Element	
Apartments Low Rise	4,221,910
Single Family Housing	1,758,950
Total	5,980,860
Net Increase of Proposed Housing Element compared to Existing uses	5,075,872
Net Increase of Proposed Housing Element compared to General Plan Update uses	2,791,826
Electricity Demand	**kWh/year**
Existing	
Apartments Low Rise	226,124
Place of Worship	9,774
Parking Lot	9,774
Total	245,672
General Plan Update	
Apartments Low Rise	363,413
Place of Worship	9,774
Single Family Housing	542,198
Parking Lot	33,840
Total	949,225
Housing Element	
Apartments Low Rise	1,074,090
Single Family Housing	542,198
Total	1,616,288
Net Increase of Proposed Housing Element compared to Existing uses	1,370,616
Net Increase of Proposed Housing Element compared to General Plan Update uses	667,063

Notes:
[1]Taken from the CalEEMod 2020.4.0 annual output for years 2029 (existing, General Plan Update, and Housing Element) in the Sierra Madre General Plan Housing Element Update Air Quality and Greenhouse Gas Impact Study prepared by MD Acoustics (July 15, 2021).

As shown in Table IV.F-11, the estimated electricity demand for the future development associated with the Housing Element is approximately 1,616,388 kWh per year. In 2019, the residential sector of the

County of Los Angeles consumed approximately 19,563 million kWh of electricity.[80] In addition, the estimated natural gas consumption for the future development associated with the Housing Element is approximately 5,980,860 kBTU per year. In 2019, the residential sector of the County of Los Angeles consumed approximately 1,236 million therms of gas.[81] Therefore, the increase in both electricity and natural gas demand from the future development associated with the Housing Element is insignificant compared to the County's 2019 residential sector demand. Furthermore, the net increase from the Existing scenario as well as the net increase from the General Plan Update scenario would also be considered insignificant in comparison to the overall County's residential demand.

Energy use in buildings is divided into energy consumed by the built environment and energy consumed by uses that are independent of the construction of the building such as in plug-in appliances. In California, the California Building Standards Code Title 24 governs energy consumed by the built environment, mechanical systems, and some types of fixed lighting. Non-building energy use, or "plug-in" energy use can be further subdivided by specific end-use (refrigeration, cooking, appliances, etc.).

Furthermore, the energy demands associated with the future development of the Housing Element would be comparable to other residential projects of similar scale and configuration and the increased density of residential uses is as a result of increased population forecasts developed by SCAG. Therefore, the project facilities' energy demands and energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary.

Conclusions

As supported by the preceding analyses, neither construction nor operation of the future development accommodated under the Housing Element would result in wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources. Based on the residential nature of the future development accommodated under the Housing Element, it would be assumed that it would not include any unusual project characteristics or construction processes that would require the use of equipment that would be more energy intensive than is used for comparable activities and includes residential developments that would not be anticipated to propose any additional features that would require a larger energy demand than other residential projects of similar scale and configuration. The project would not engage in wasteful or inefficient uses of energy and aims to achieve energy conservations goals within the State of California.

Mitigation Measures:

None required.

Impact F-4: Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Impact Analysis:

Regarding federal transportation regulations, all of the sites identified for redesignation in the Housing Element are located in already developed areas. Access to/from each site is from existing roads. These

[80] California Energy Commission, Electricity Consumption by County. https://ecdms.energy.ca.gov/elecbycounty.aspx

[81] California Energy Commission, Gas Consumption by County. http://ecdms.energy.ca.gov/gasbycounty.aspx

roads are already in place, therefore, the potential future redevelopment of the sites would not interfere with, nor otherwise obstruct intermodal transportation plans or projects that may be proposed pursuant to the ISTEA because SCAG is not planning for intermodal facilities in the project area.

Regarding the State's Energy Plan and compliance with Title 24 CCR energy efficiency standards, all future development is required to comply with the California Green Building Standard Code requirements for energy efficient buildings and appliances as well as utility energy efficiency programs implemented by the SCE and Southern California Gas Company.

Regarding the State's Renewable Energy Portfolio Standards, all future development would be required to meet or exceed the energy standards established in the California Green Building Standards Code, Title 24, Part 11 (CALGreen). CalGreen Standards require that new buildings reduce water consumption, employ building commissioning to increase building system efficiencies, divert construction waste from landfills, and install low pollutant-emitting finish materials.

As discussed under Impact F-2 above, the Housing Element is also anticipated to be consistent with the goals and policies of the City of Sierra Madre Energy Action Plan.

The future development accommodated under the Housing Element would be required to be designed in compliance with California's Energy Efficiency Standards and 2019 CALGreen Standards. These measures include, but are not limited to the use of water conserving plumbing, the use of LED lighting, and water-efficient irrigation systems.

Therefore, the future development accommodated under the Housing Element would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency; therefore, impacts would be less than significant.

Mitigation Measures:

None required.

5. LEVEL OF SIGNIFICANCE AFTER MITIGATION

All impacts are less-than significant. No mitigation measures are necessary.

V. ENVIRONMENTAL IMPACT ANALYSIS
G. LAND USE AND PLANNING

1. INTRODUCTION

This section of the SEIR analyzes the potential environmental effects related to land use and planning from implementation of the proposed project.

A. 2015 General Plan EIR Analysis and Conclusions

The 2015 General Plan EIR determined that implementation of the 2015 General Plan Update would not divide an established community. The City is almost entirely built out and the majority of the development that would be accommodated under the 2015 General Plan Update would occur on infill opportunity sites in areas of the City that are already developed or designated for development. Furthermore, the fundamental principle behind the land use policies of the 2015 General Plan Update is to maintain the existing low-density village character of Sierra Madre in the same urban development pattern that exists today and the 2015 General Plan Update and Implementation Program include policies and implementation measures that would help reduce potential impacts on existing communities as a result of future development. As such, the 2015 General Plan EIR determined that impacts related to the division of a community would be less than significant.

The 2015 General Plan EIR determined that implementation of the General Plan Update would not conflict with applicable plans adopted for the purposes of avoiding or mitigating an environmental effect. Because the General Plan Update is not a "growth oriented" plan and the City is almost entirely built out, new or revised policies, land uses changes, and other components of the 2015 General Plan Update would not dramatically alter the land uses of the community and policies that would affect land use and planning are generally aimed at capitalizing on existing opportunities for redevelopment with minimal changes to the existing land use patterns. Additionally, land use designations would generally remain similar to existing land uses designations. As such, the 2015 General Plan EIR found that the 2015 General Plan Update would be consistent with California Government Code Section 65302, AB 1358 (the California Complete Streets Act), AB 32 (The Global Warming Solutions Act), SB 375 (The Sustainable Communities and Climate Protection Act), and the South Coast Air Quality Management District (SCAG)'s 2012-2035 Regional Transportation Plan / Sustainable Communities Strategy (2012 RTP/SCS) and significant impacts related to conflicts with adopted land use plans would not occur.

The 2015 General Plan EIR determined that implementation of the 2015 General Plan Update not conflict with an adopted conservation plan protecting biological resources as the City is not in the plan area of any habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan. As such, the 2015 General Plan EIR found that no conflict with such plans would occur and, accordingly, no related impact would occur.

2. ENVIRONMENTAL SETTING

A. Existing Conditions

1) Citywide

The City is in the foothills of the San Gabriel Valley below the southern edge of the Angeles National Forest, approximately 17 miles northeast of downtown Los Angeles at the base of the San Gabriel

Mountains. The City is in the central region of Los Angeles County and is bounded by the cities of Arcadia to the east and south and Pasadena to the west and the Angeles National Forest to the north. The nearest major transportation corridor to the City is Interstate 210 (I-210), which runs in an east-west direction approximately one mile south of the City limits and serves as the gateway connector to the regional freeway network for residents of Sierra Madre. No interstate or state route crosses the City's boundaries.

Existing Land Uses

The City comprises 1,882 acres (2.94 square miles). There are three distinct geographic patterns/areas in the City—the foothill slope, canyon (knows as the Sierra Madre Canyon or The Canyon), and hillside. Two-thirds of the City is within the foothill slope area, which is the "developable" area of the City and is largely developed. Sierra Madre is an established, built-out community with just a handful of vacant parcels remaining. The City's land use pattern is well established and not likely to change over time.

The predominant land use in the City is residential, consisting of low, medium, and medium-high density residential. The majority of residential uses are low density with a significantly smaller percentage accounting for medium and medium high density. The majority of low- and medium-density residential occurs in the foothill slope area; however, there is some low- and medium-density residential within the canyon and along the hillside areas.

The higher-density residential developments are located along the Sierra Madre Boulevard corridor to the east and west ends of the commercial district on Sierra Madre Boulevard (see description of commercial area location below), and the neighborhoods which are clustered around the downtown district, providing a buffer between commercial and low-density residential uses. The streets most identified with the higher density development are Esperanza Avenue, Mariposa Avenue from Park Avenue to Baldwin Avenue, Suffolk Avenue and Laurel from Baldwin Avenue to Mountain Trail. The housing stock in these areas is a mixture of older apartment buildings constructed between the 1950s through 1970s and newer apartment and condominium buildings from the 1980s and 1990s. Additionally, a few condominium developments and a 46-unit senior housing facility have been constructed in the past 20 years.

The areas adjacent to the higher density areas are developed with medium density developments characterized by properties with two or three units on a lot. Medium density developments can be found along San Gabriel and Santa Anita Courts in the southeast area of the City, as well as Laurel Avenue and Victoria Lane. Although in most cases, the units look like single-family houses, second unit exists to the side, rear or on the second floor of the property. The low-density residential appearance of these properties is important to maintain the character of the neighborhoods.

As indicated above, the majority of residential areas are low density developments. Due to the City's original rural development pattern, the urbanization of the City took place over a period of 100 years. The low-density residential pattern varies throughout the City. Lot sizes vary dramatically as do the structures built on them, which enhances Sierra Madre's charm. The periods of tract home development occurred in the post-war era of the 1940s and 1950s throughout the City, in the 1960s and 70s in the northeastern portion of the City at Liliano Drive and in the development of two subdivisions along Orange Grove, and more recently in the 1980s and 1990s with the subdivision of the Jameson Estate in the west central area of town. A notable hillside subdivision development in the 2000s occurred above Carter Avenue, at the intersection of Baldwin Avenue, which is the original land of the Nathanial Carter estate, historically known as "Carterhia." There is one canyon in the City which has been developed. This is known as "Sierra Madre Canyon" or "The Canyon" by locals. It has its own unique development pattern and a more rural lifestyle that is valued by its residents. An ordinance that specifically addresses the unique development standards of "The Canyon" was adopted in 2011 in an effort to preserve its rustic and historic character.

The hillside area has experienced some development activity, mostly involving individual properties rather than multi-home subdivisions and in 2007, the City updated a hillside ordinance to closely regulate development of hillside land and the canyons within the hillside that have not been developed.

Other land uses include institutional, commercial, light manufacturing, mixed use, civic uses, public schools, and open space and parks. Open space is the most prominent nonresidential land use, with institutional uses making up the third largest area of land. Institutional uses are generally mixed within the residential and commercial areas. Institutional uses include four elementary schools, one middle school, one high school, seven churches, the Mater Dolorosa Passionist Retreat Center and City-owned facilities. Most institutional uses are older and well established in the City and intermixed with commercial and residential uses.

Approximately less than two percent of the land use in the City is comprised of commercial uses. All of the City's commercial uses are in the downtown area of the City, concentrated along Sierra Madre Boulevard, Baldwin Avenue, and adjacent smaller streets. Specifically, the boundaries of this area are along Sierra Madre from Lima Street to the west and Baldwin Avenue to the east. Along Baldwin Avenue, it extends from Suffolk Avenue to the south and up to Highland Avenue to the north. This area is characterized by small "one-of-a-kind" retail businesses, branch offices of major lending institutions, medical offices, and other personal service businesses. There are also magazine and newspaper publishers in town.

East Montecito Avenue is the City's manufacturing and light industrial district. This street is locally historic in that a number of older industrial structures still exist, as well as historic housing, such as the original ticket booth for the Red Line, and the original cabins built for the tuberculosis patients who came to the area before Sierra Madre was formed. There is very low housing turnover in this area and housing structures include single family homes and one complex of live-work condominiums. This district includes several businesses such as plumbers' and mechanics' shops, storage facilities, welders, vehicle storage, research and development firms, and crafts-related businesses, such as furniture making, glass lamp making, pottery, seamstress, film making, photography and artists' studios. This area is subject to the Voters Empowerment Ordinance (Measure V) requirements.

Current General Plan and Land-Use Designations

The current Sierra Madre General Plan was adopted on July 14, 2015, and has four chapters, each with a series of sections or topics related to that particular chapter. Per California Government Code Section 65300, there are seven mandatory elements of a general plan—land use, housing, circulation, open space, conservation, noise, and safety. As shown in Figure III-3, 11 land use designations, plus one overlay zone and the Measure V[1] boundary area currently regulate development in the City. The predominant land use designation in Sierra Madre is residential, comprising approximately 61 percent of the land in the City, with commercial, light manufacturing, public, institutional, and open space making up the remainder of the land use designations.

[1] *Sierra Madre voters adopted Measure V in 2007 to preserve the City's small-town downtown character. This measure limits building heights to 30 feet and two stories and the density to 13 dwellings units per acre in the City's central core area, including East Montecito Avenue.*

Current Zoning

Title 17 (Zoning) of the City of Sierra Madre Municipal Code provides the basis for current zoning in the City. The City's official zoning map has 15 zoning designations and the Measure V boundary area. Specifically, the zoning map contains nine residential zoning designations, as well as a zoning designation for each of the following: commercial, manufacturing, institutional, civic/city park, open space, and hillside management. The City also has two specific plans: the British Home Specific Plan, adopted on February 12, 2013, for The British Home retirement community at 647 Manzanita Avenue; and the Kensington Specific Plan, adopted on July 24, 2012, for The Kensington Sierra Madre assisted living and memory care facility at 245 West Sierra Madre Boulevard. The specific plans are the regulating zoning document for the properties.

2) Housing Element Project Sites

Site 1

Site 1 includes nine parcels along Mariposa Avenue and Lima Street that are currently developed with older single- and multi-family residential uses (duplex and fourplex units), ranging in age from 1895 to 1948. Most units are modest, with a low improvement to land value ratio and numerous units exhibiting deferred maintenance. Surrounding land uses include the Sierra Madre City Hall parking lot and Memorial Park to the east, multi-family residential uses to the south and west, and the Sierra Madre City Hall complex including the fire and police departments and commercial uses along Sierra Madre Boulevard to the north. Currently the land use designations for this site are Residential High Density-13 du/acre (1.64 ac) and Residential High Density-20 du/acre (0.8 ac) and the zoning is R-3 and R-3H.

Site 2

Site 2 includes ten parcels along Suffolk Avenue and Baldwin Avenue. Site 2 is currently developed with older multi-family development and existing units identified for redevelopment range in age from 1902 to 1947, have a low improvement to land value ratio, and exhibit deferred maintenance. Surrounding land uses include single-family uses to the south, multi-family to the east, commercial uses including a U.S. Post Office to the west, and multi-family uses and a gas station to the north. The current land use designation for this site is Residential High Density-13 du/acre and the existing zoning is R-3.

Site 3

Site 3 includes one parcel along Sierra Madre Boulevard that is currently developed with four older multi-family residential buildings, open space, and parking areas. Specifically, the Park Avenue Apartments consist of three buildings developed in 1960 with three to six units each, and a two-unit building constructed in 1935, for a total of seventeen units. The improvement to land value ratio is just 25%, rendering the site economically suitable for redevelopment. The site includes a large surface parking area and undeveloped open space area. Surrounding land uses include other multi-family residential uses to the east, south, and west, and single-family residential to the north. Sierra Madre Boulevard is a two-lane roadway with bike lanes and parking on each side. The current land use designation for this site is Residential High Density-13 du/acre and the existing zoning is R-3.

Site 4

Site 4 includes one parcel along N. Baldwin Avenue that is currently considered underdeveloped with an older single-family residence built in 1947. The improvement to land value ratio is just 30%. Surrounding

land uses include other single-family residential uses and the Episcopal Church of the Ascension and private Gooden School to the east, single-family residential uses to west, and multi-family to the north and south. N. Baldwin Avenue is a two-lane roadway with parking on each side. The current land use designation for this site is Residential High Density-13 du/acre and the existing zoning is R-3.

Site A

Site A is located on the parking area of St. Rita Catholic Church. Surrounding land uses single-family residential uses to the east, south, and west. St. Rita Catholic Church is located to the northwest and a single-family residence to the northeast. The current land use designation for the site is Institutional and the existing zoning is I.

Site B

Site B is located in the parking area of the United Methodist Church. Surrounding land uses include multi-family uses to the east and south, commercial and school uses to the west, and single-family residential uses to the north. Sierra Madre Boulevard becomes a separated roadway with large center median to the west of Michillinda Avenue. The current land use designation for the site is Institutional and the existing zoning is I.

Site C

Site C is located on the parking area of the Old North Church. Surrounding land uses include commercial uses to the east and south, single- and multi-family residential uses to the west, and multi-family uses to the north. Site C is located to the east of the Sierra Madre City Hall. The current land use designation for the site is Institutional and the existing zoning is R-3 and C.

Site D

Site D is located on the asphalt play fields and parking area of the Bethany Church and School. Surround land uses include church uses to the east, single-family residential uses to the south, multi-family residential uses to the west and north. N. Baldwin Avenue to the east is developed with commercial uses. The current land use designation for the site is Institutional and the existing zoning is I.

B. Regulatory Setting

1) Federal

No existing federal regulations pertain to the land uses within the project area.

2) State

State Planning Law

State planning law (California Government Code Section 65300) requires every city in California to adopt a comprehensive, long-term general plan for physical development of the city and its sphere of influence. A general plan should consist of an integrated and internally consistent set of goals and policies that are grouped by topic into a set of elements and are guided by a citywide vision. State law requires that a general plan address seven elements or topics (land use, circulation, housing, conservation, open space, noise, and safety), but allows some discretion on the arrangement and content. Additionally, each of the

specific and applicable requirements in the state planning law should be examined to determine if there are environmental issues within the community that the general plan should address, including but not limited to hazards and flooding.

Additionally, on September 30, 2008, Assembly Bill 1358 (AB 1358), the California Complete Streets Act, was signed into law, becoming effective January 1, 2011. AB 1358 places the planning, designing, and building of complete streets into the larger planning framework of the general plan by requiring **jurisdictions** to amend their circulation elements to plan for multimodal transportation networks.

3) Regional

Southern California Association of Governments

The Southern California Association of Governments (SCAG) is a council of governments representing Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura counties. SCAG is the federally recognized metropolitan planning organization (MPO) for this region, which encompasses over 38,000 square miles. SCAG is a regional planning agency and a forum for addressing regional issues concerning transportation, the economy, community development, and the environment. SCAG is also the regional clearinghouse for projects requiring environmental documentation under federal and state law. In this role, SCAG reviews proposed development and infrastructure projects to analyze their impacts on regional planning programs. As the southern California region's MPO, SCAG cooperates with the South Coast Air Quality Management District, the California Department of Transportation (Caltrans), and other agencies in preparing regional planning documents. SCAG has developed regional plans to achieve specific regional objectives. The City of Sierra Madre is within the San Gabriel Valley Council of Governments (SGVCOG) subregion of SCAG.

Regional Housing Needs Assessment

The RHNA is mandated by state law as part of the periodic process of updating local housing elements of the General Plan. The RHNA allocation process begins with a regional determination figure (the total number of housing units needed to meet housing needs in the SCAG region) issued by the California Department of Housing and Community Development (HCD), followed by an allocation to each jurisdiction within the region (specific number of units allocated to each jurisdiction). In prior Housing Element cycles, the regional determination figure was based solely on projected housing need during an eight-year planning period. Recent changes to state law added a requirement that existing housing need must be incorporated in the regional determination by considering housing need indicators such as vacancy rates, jobs/housing balance, cost burden, and overcrowding.

SCAG is mandated to allocate the regional housing need set by HCD to city and county jurisdictions in the region. In allocating the region's future housing needs to jurisdictions, SCAG is required to take the following factors into consideration pursuant to Section 65584 of the State Government Code:

- Market demand for housing;
- Employment opportunities;
- Availability of suitable sites and public facilities;
- Commuting patterns;
- Type and tenure of housing;
- Loss of units in assisted housing developments;
- Over-concentration of lower income households; and
- Geological and topographical constraints.

The RHNA for the SCAG region was adopted on March 4, 2020 and covers a planning period from October 2021 through October 2029. The major goal of the RHNA is to assure a fair distribution of housing among cities and counties within the southern California region, so that every community provides an opportunity for a mix of housing for all economic segments. The housing allocation targets are not building requirements, but goals for each community to accommodate through appropriate planning policies and land use regulations. Allocation targets are intended to assure that adequate sites and zoning are made available to address anticipated housing demand during the planning period.

The City of Sierra Madre's share of regional future housing needs is a total of 204 new units for the 2021-2029 Housing Element. This allocation is distributed into various income categories, as shown in Table V.G-1, Sierra Madre Housing Needs for 2021-2029 Housing Element. The RHNA includes a fair share adjustment which allocates future (construction) need by each income category in a way that meets the State mandate to reduce the over-concentration of lower income households in one community.

Table V.G-1
Sierra Madre Housing Needs for 2021-2029 Housing Element

Income Category (% of County AMI)	Number of Units	Percent
Very Low (0 to 50%) [1]	79	38
Low (51 to 80%)	39	19
Moderate (81 to 120%)	35	17
Above Moderate (Over 120%)	51	26
Total	**204**	**100**

AMI = Area Median Income
1 An estimated half of the City's 79 very low income housing needs (39 units) are for extremely low income households earning less than 30% AMI.
Source: Southern California Association of Governments, 6th Cycle RHNA.

Under the RHNA allocation, the City is required to provide the zoned capacity to accommodate the development of at least 204 residential units using various land use planning strategies. The City provides capacity for housing through local zoning regulations; however, the City is not required to physically construct 204 units as a result of the RHNA allocation.

Regional Transportation Plan/Sustainable Communities Strategy

On September 3, 2020, SCAG's Regional Council adopted the Connect SoCal 2020–2045 RTP/SCS. On October 30, 2020, CARB accepted SCAG's determination that the SCS would achieve GHG emission reduction targets. The 2020-2045 RTP/SCS meets federal and state requirements and is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. The 2020-2045 RTP/SCS builds upon and expands land use and transportation strategies established over several planning cycles to increase mobility options and achieve a more sustainable growth pattern, including land use strategies that focus on urban infill growth and walkable, mixed-use communities in existing urbanized and opportunity areas. More mixed-use, walkable, and urban infill development would be expected to accommodate a higher proportion of growth in more energy-efficient housing types like townhomes, apartments, and smaller single-family homes, as well as more compact commercial buildings types. Furthermore, the 2020-2045 RTP/SCS includes transportation investments and land use strategies that encourage carpooling, increased transit use, active transportation opportunities, and promoting more walkable and mixed-use communities which would potentially help to offset passenger VMT.

4) Local

City of Sierra Madre Municipal Code

Sierra Madre's Zoning Code (Title 17) contains the development standards for the various zoning categories within the City.

Measure V

In the April 17, 2007 election, the residents of Sierra Madre approved the Sierra Madre Voters' Empowerment Ordinance 2-30-13, referred to as "Measure V." This measure was, in part, a reaction to the potential development contemplated in a draft Specific Plan for downtown Sierra Madre. The findings of this initiative included the following:

- Preserving the small town character of downtown Sierra Madre is a matter of utmost importance, and residents of our city must not be excluded from major decisions affecting our downtown.
- No City Council or City staff can possess the necessary community-wide sensitivity to make decisions to ensure that the small town character of downtown Sierra Madre will be preserved.
- Only by carefully considering long-standing land use goals as to height and density will the small town character of downtown Sierra Madre be maintained for all members of our community.
- Downtown development decisions that could deviate from our long-standing goals should be made by the entire city after a public debate and an election, and not by a few City Hall insiders.

The initiative ordinance applies to the "Central Core Area" of the City, which is located in downtown and includes 205 parcels, as well as public right-of-way, streets, alleys, and easements. The ordinance establishes the following development standards in the Central Core Area:

- A maximum of two stories in any new construction;
- A maximum of thirty feet height in any new construction; and
- A maximum of thirteen net dwelling units per acre. A density bonus, to the extent required by state law to provide additional units for affordable housing, may be allowed in addition to this density limit.
- Any proposal in the Central Core Area that exceeds the specified height and density limitations requires approval by a vote of the people.

City of Sierra Madre 2015 General Plan

Land Use Element

The fundamental principle behind the land use policies of the General Plan is to maintain the existing low-density village character of Sierra Madre in the same urban development pattern that exists today. This provides a central business district that serves local residents and attracts visitors to the boutique and retail establishments. This area also contains religious and educational institutions and public buildings. East of the central business district is a light-manufacturing area which should also be preserved or adapted to complimentary residential and commercial uses.

Parkland and open space should be preserved and expanded when possible. Hillside areas should be preserved either in their natural state or with very low density residential development designed to be sensitive to the environmental nature of the foothills. This should include water conservation measures to reduce and minimize the impact to the City's water supply and the ability to serve its water customers.

Two general categories of open space are recognized: natural and constructed. Constructed open space includes developed recreational parklands, and natural open space means undeveloped natural areas conserved for their wild land characteristics. Natural open space is the most precious because it cannot be replaced once lost. Both constructed open space and natural open space should be preserved and expanded when possible.

Safety Element

The purpose of the Safety Element Update is to ensure consistency with the Housing Element Update and to comply with recent State legislation and guidelines (including Assembly Bill 162, Senate Bill 1241, Senate Bill 99, Assembly Bill 747, Senate Bill 1035 and Senate Bill 379). Technical amendments will be made to the Safety Element to achieve compliance with State, regional, and local policies and guidelines. The technical amendments will incorporate data and maps, address vulnerability to climate change; and incorporate policies and programs from the City's Hazard Mitigation Plan. The Safety Element amendments will be submitted to the California Geological Survey, California Office of Emergency Services, California State Board of Forestry and Fire Protection, and Federal Emergency Management Agency for review. Proposed General Plan Safety Element policies are shown in Section 3. Proposed General Plan Policies.

AB 2140 authorizes a city, county, or a city and county to adopt a federally specified local hazard mitigation plan along with its safety element update. The local hazard mitigation plan must be approved by FEMA and the Office of Emergency Services to qualify jurisdictions for federal financial assistance.

The City adopted the Sierra Madre Hazard Mitigation Plan on January 11, 2020. The Hazard Mitigation Plan includes assessment of risks from earthquakes, floods, wildfires, landslides, and windstorms and provides mitigation strategies. The General Plan incorporates information and policies from the Hazard Mitigation Plan, including policies that augment previously adopted policies, address climate change adaptation and resilience, and address multiple hazards, windstorms, and utility safety and protection.

Multi-hazards in the City include wildland and urban fires, seismic events, flooding, landslides, and windstorms. These events have the potential to create hazardous conditions throughout the City that require addressing on a citywide scale. Funding to address these issues may be available through programming in the City's Capital Improvement Program, General Fund, and grants.

Circulation Element

Minor updates to the Circulation Element include updates to reflect current conditions and a policy related to the City's adopted vehicle miles traveled (VMT) thresholds as a metric to evaluate environmental impacts of proposed projects. Vehicle miles traveled evaluates the number of miles traveled by each vehicle. This shift in standard is mandated by the State as part of Senate Bill 375 in keeping with the State's goals to reduce greenhouse gas emissions, encourage infill development and improve public health through active transportation (e.g., bicycling and walking). Proposed General Plan Circulation Element policies are shown in Section 3. Proposed General Plan Policies.

The following are relevant Land Use policies and implementation measures of the Sierra Madre General and Implementation Program.

General Plan Policies

Land Use Element

- Policy L1. 3: Maintain areas of the City for the development of multiple-unit apartment, condominium and townhouse development through the review and update of appropriate development standards.
- Policy L2.2: Establish measures of, and limits to, resident/patient occupancy in group living facilities as part of the zoning code implementing these provisions. Except in the central core area covered by Measure V, such occupancy limit shall supersede the dwelling unit density limit.
- Policy L2.3: Establish zoning provisions for group living facilities including floor area limits, height limits, setbacks, location of residential uses in commercial areas, and design guidelines.
- Policy L2.4: Adopt a zoning code to implement the foregoing together with other appropriate regulations of group living facilities, and review and update such code and other implementing ordinances every two years to ensure compliance with Goals and Policies of the General Plan.
- Policy L4.1: Ensure that the expansion of existing uses is reflective of and complements the overall pattern of development, without changing the character of existing development.
- Policy L4.2: Except for those single family residences that would not otherwise require a conditional use permit (CUP), development projects that cumulatively comprise over one acre of land on one or more parcels require a CUP unless a specific plan or master plan is approved for the proposed project.
- Policy L7.1: Maintain maximum lot coverage and floor area ratios which allow for adequate buffering from neighboring properties, usable private yard area, air circulation and light.
- Policy L7.3: Limit the height of new buildings to reflect the prevailing height patterns on the street and within the Sierra Madre community.
- Policy L7.4: Encourage new residential development to be compatible with existing structures including the following:

  a. Maintenance of front, side, and rear yard setbacks.
  b. Use of landscaping to complement the design of the structure and reflect the Sierra Madre vegetation patterns with an emphasis on sustainable, low water use landscaping and use of permeable surfaces for hardscaping, and the use of irrigation equipment that automatically senses the need for water.
  c. Minimize paving in the front yard as necessary to accommodate driveways and pedestrian walkways.

- Policy L24.1: Require that new residential development be compatible with and complement existing structures on the block:

  a. Maintain existing front yard setbacks on the block;
  b. Use compatible building materials, colors and forms;
  c. Minimize front yard paving and prohibit front yard parking

- Policy L27.1: Create an overlay zoning ordinance that allows for certain commercial uses in addition to residential uses. Residential densities, floor area ratios, and other development standards shall be the same as for the underlying residential zone.
- Policy L27.2: Maintain zoning districts which contain classifications of permitted and conditionally permitted uses allowed on a block by block basis.
- Policy L37.8: Ensure that all development and new uses are compatible with adjacent uses, and yield no significant negative impacts to noise, air quality, water quality and traffic.
- Policy L41.5: Review and update the Institutional Zoning Ordinance and other implementing ordinances every two years as necessary to ensure compliance with the Goals and Policies of the General Plan.

Implementation Program Measures

Land Use Implementation Program

Measure IM-5: The City shall continue to enforce the C (Commercial) Zoning Ordinance, and amend it as necessary to maintain an area of the City for commercial uses, update standards for new construction and to include those uses it wishes to encourage in the downtown area as permitted or conditionally-permitted uses.

Measure IM-6: The City shall amend the Zoning Code as necessary to require that the expansion of existing uses is reflective of and complements the overall pattern of development without changing the existing character of development.

Measure IM-7: The City shall amend the Zoning Code as necessary to require that new development that cumulatively comprise over one acre of land on one or more parcels require a CUP, unless a specific plan or master plan is approved for the project.

Measure IM-12: The City shall continue to enforce and amend the R-1 (One Family Residential) Zoning Ordinance as necessary to ensure that development is compatible in design and scale with the neighborhood.

Measure IM-32: The City shall continue to enforce the R-2 (Two-Family Residential) Zoning Ordinance.

Measure IM-35: The City shall continue to enforce the R-3 (Multiple Family Residential) Zoning Ordinance.

Measure IM-41: The City shall continue to enforce the C (Commercial) Zoning Ordinance.

Measure IM-43: The City shall continue to enforce the Nonconforming Uses Ordinance (SMMC Chapter 17.56).

Measure IM-52: The City shall continue to enforce the M (Manufacturing) Zoning Ordinance.

Measure IM-57: The City shall amend the M (Manufacturing) Zoning Ordinance and the Variances and Conditional Use Permit Zoning Ordinance (SMMC Chapter 17.60) to require approval of a conditional use permit to allow a new use on a site to adequately protect existing adjacent uses.

Measure IM-59: The City shall continue to enforce the Institutional (I) Zoning Ordinance.

Measure IM-65: The City shall process any code amendments necessary to ensure compliance of the R-1, R-2, R-3, RC, RP, H, M and C Zoning Ordinances with the Goals and Policies of the General Plan.

3. ENVIRONMENTAL IMPACTS AND MITIGATIONS

A. Threshold of Significance

Appendix G of the CEQA Guidelines provides thresholds that address impacts related to land use. Specifically, the Guidelines state that the proposed project may have an adverse significant land use impact if it would:

a) Physically divide an established community; or
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purposes of avoiding or mitigating an environmental effect.

B. Project Impacts and Mitigation Measures

Impact G-1: Would the project physically divide an established community?

Impact Analysis:

The 2015 General Plan EIR determined that implementation of the General Plan Update would not divide an established neighborhood or community as the majority of the development and redevelopment potential that would be accommodated by the General Plan Update would occur in areas of the City that are already developed or designated for development, with most of the development potential proposed under the General Plan Update occurring on the infill opportunity sites. The infill opportunity sites include mostly underutilized parcels in various areas of the City.

Additionally, the General Plan Update was not a "growth oriented" plan and Sierra Madre is almost entirely built out. The General Plan Update did not represent a dramatic shift in how land uses would be distributed in the city and proposed land use designations would generally remain similar to existing land uses designations and the majority of land use in the city would remain residential. The character of the existing communities would remain largely unchanged. The General Plan Update also did not propose any changes to the City's circulation network, nor did it introduce new facilities or uses that would divide an established neighborhood or community. The General Plan Update and Implementation Program also include policies and implementation measures, respectively, that would help reduce potential impacts on existing communities as a result of future development that would be accommodated by the General Plan Update.

The project proposes land use designation changes, rezoning, and updates to the General Plan Land Use, Safety, and Circulation Elements. No changes to the existing street grid or new highways or roadways are proposed that would physically divide the City. The land use changes would apply to the eight identified housing opportunity sites. Sites 1-4 are currently designated, zoned and developed with existing residential uses in established neighborhoods. The changes would result in increasing the density standards on sites located within areas of existing medium-high density residential uses around the downtown area near Baldwin Avenue, Sierra Madre Boulevard, and adjacent streets. Similar to the development proposed under the 2015 General Plan Update, the project would concentrate redevelopment efforts on underutilized parcels in the hillside area of the City and not the foothill slope area. Additionally, the proposed overlay zone for congregational property on Sites A-D are also within areas that are currently surrounded by residential development.

Specifically, the update to the Land Use Element includes establishing two new multi-family residential land use categories (R-3-20 and R-3-30), creating an Affordable Housing Overlay on select congregational sites, along with minor changes to the Land Use table and map to accommodate residential land uses on

the sites identified to meet the RHNA allocation. The existing and proposed General Plan map is shown in Figures IIII-3, Existing General Plan Designations and Figure IIII-4, Proposed General Plan Designations. Proposed General Plan Land Use Element policies are shown in Section 3. Proposed General Plan Policies. Similar to the 2015 General Plan Update, there would be no impact to the established community.

The City adopted the Sierra Madre Hazard Mitigation Plan on January 11, 2020. The Hazard Mitigation Plan includes assessment of risks from earthquakes, floods, wildland and urban fires, landslides, and windstorms and provides mitigation strategies. The Safety Element and General Plan incorporates information and policies from the Hazard Mitigation Plan, including policies that augment previously adopted policies including climate change. The revisions to the Safety Element are intended to protect people and property from hazards that could affect the long-term quality of life, safety, and viability for residents and business. The goals and objectives are to prevent disasters where possible and ensure adequate levels of service of protection for people and property. No land uses, roadways, or structures are proposed. Therefore, revisions to the Safety Element would not divide an established community.

As identified in the Project Description, the update to the Circulation Element includes minor changes to the Circulation Element include updates to reflect current conditions and a policy related to the City's adopted vehicle miles traveled (VMT) thresholds as a metric to evaluate environmental impacts of proposed projects. Vehicle miles traveled evaluates the number of miles traveled by each vehicle. This shift in standard is mandated by the State as part of Senate Bill 375 in keeping with the State's goals to reduce greenhouse gas emissions, encourage infill development and improve public health through active transportation (e.g., bicycling and walking). Proposed General Plan Circulation Element policies are shown in Section 3. Proposed General Plan Policies. The Circulation Element does not include any policies related to street or roadway changes. Therefore, revisions to the Circulation Element would not divide an established community.

Similar to the 2015 General Plan Update, the updates to the Housing, Land Use, Safety and Circulation Elements would not result in an impact to an established community nor land use patterns and therefore will not have an adverse impact. All future development would go through the design review and site plan review processes to ensure any new structure is harmonious with existing uses. As such, adoption of the Housing Element 2021-2029 Update and associated Land Use, Safety and Circulation Element updates would not physically divide an established community and no impact would occur.

Mitigation Measures:

None required.

Impact G-2: Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purposes of avoiding or mitigating an environmental effect?

Impact Analysis:

The EIR for the 2015 General Plan Update found that the project would not conflict with any land use policy or regulation. The General Plan is used to guide the growth and development (e.g., infill development, redevelopment, and revitalization/restoration) within the City. Land use changes identified in the General Plan Update were planned for areas of the City that are already developed or designated for development, with the majority of the development potential proposed for the infill opportunity sites. Revisions to all elements of the General Plan with the exception of the Housing Element were updated including revisions to the prior land use map and goals and policies intended to address existing and anticipated issues in the City. Additionally, land use designations and details of the projected buildout

(number of dwelling units and square footage of nonresidential development) to be accommodated under the General Plan Update buildout were included. As mentioned above, because the General Plan Update is not a "growth oriented" plan and Sierra Madre is almost entirely built out, new or revised policies, land uses changes, and other components of the proposed General Plan Update did not dramatically alter the land uses of the community.

The EIR also found that the General Plan Update was consistent with applicable state, regional and local laws, regulations, plans and guidelines including state planning law, the California Complete Streets Act, and SCAG 2012-2035 RTP/SCS.

State Planning Law and California Complete Streets Act Consistency

The General Plan amendments were prepared in accordance with state planning law in California Government Code Section 65300 *et seq*. This update is meant to be a framework for guiding planning and development in Sierra Madre and serves as the blueprint for the City's growth and development to accommodate the 2021-2029 Housing Element. The amendments to the General Plan land use map and new goal and policies strive to preserve and ensure land-use compatibility throughout the City.

The 2015 General Plan already contains policies that help the City implement AB 1358, the California Complete Streets Act, which helps the City increase the number of trips made by alternative modes of travel (e.g., transit, bicycling, and walking), correspondingly reducing the number of vehicle trips and associated greenhouse gas emissions. An increase in transit trips, bicycling, and walking would thus help the City meet the transportation needs of all residents, workers, and visitors while reducing traffic congestion and helping meet the greenhouse gas reduction goals of AB 32, The Global Warming Solutions Act, and SB 375, which are implemented through SCAG's Connect SoCal 2020–2045 RTP/SCS.

The project does not include any policies or land uses that would conflict with state planning law. Redeveloping Sites 1-4 and Sites A-D with higher density residential uses would locate housing closer to commercial uses, which would potentially assist with reducing vehicle trips. Therefore, the General Plan, including the proposed project, would be consistent with the goals.

SCAG 2016-2040 RTP/SCS Consistency

The 2015 General Plan EIR provided an assessment of the General Plan Update's relationship to pertinent 2012–2035 SCAG RTP/SCS goals and SCAG population growth projections. The 2015 General Plan EIR concluded the 2015 General Plan growth forecast typically exceeds the population and housing projections because buildout of the General Plan Update was not tied to a development timeline, whereas SCAG forecasts are demographic projections based on a time horizon. However, the 2015 General Plan Update would be consistent with the applicable 2012-2035 RTP/SCS goals.

On September 3, 2020, SCAG's Regional Council adopted the Connect SoCal 2020–2045 RTP/SCS, which supersedes the 2012-2035 RTP/SCS. On October 30, 2020, CARB accepted SCAG's determination that the SCS would achieve GHG emission reduction targets. The 2020-2045 RTP/SCS meets federal and state requirements and is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. The 2020-2045 RTP/SCS builds upon and expands land use and transportation strategies established over several planning cycles to increase mobility options and achieve a more sustainable growth pattern, including land use strategies that focus on urban infill growth and walkable, mixed-use communities in existing urbanized and opportunity areas. More mixed-use, walkable, and urban infill development would be expected to accommodate a higher proportion of growth in more energy-efficient housing types like townhomes, apartments, and smaller single-family homes, as well as more compact commercial buildings types. Furthermore, the 2020-2045 RTP/SCS

includes transportation investments and land use strategies that encourage carpooling, increased transit use, active transportation opportunities, and promoting more walkable and mixed-use communities which would potentially help to offset passenger VMT.

The project proposes land use designation and zoning changes that would accommodate the RHNA. These land use designation and zoning changes would allow for development characterized as urban infill, which would locate development near commercial, school, and institutional uses to assist with creating a walkable, mixed-use community in the existing urbanized City of Sierra Madre. Development on the opportunity sites would accommodate a higher proportion of growth in newer, and more energy-efficient housing types like townhomes and apartments.

Similar to the 2012-2035 RTP/SCS, the Connect SoCal 2020–2045 RTP/SCS goals are directed toward transit, transportation and mobility, and protection of the environment and health of residents. Development on Sites 1-4 and A-D would be required to implement project design features that reduce VMT, on-site traffic calming and pedestrian network improvements, and provide bike parking and end-of-trip facilities to reduce VMT. Additionally, development on Sites 1-4 and A-D would be required to implement Transportation Demand Management (TDM) measures as mitigation. These TDM strategies include school carpool programs, marketing and education, encouraging telecommuting and alternative work schedule, encouragement of local school attendance, unbundled parking costs, and bike share programs. Bothe the project design features and TDM strategies are approved by San Gabriel Valley Council of Governments as means to effectively offset passenger VMT. Therefore, implementation of the proposed project would not conflict with 2016-2040 RTP/SCS goals.

General Consistency

The 2021-2029 Housing Element examines the City of Sierra Madre's housing needs, as they exist today, and projected future housing needs. This update focuses on addressing the City's housing needs by providing goals, policies and programs associated with fair housing, the prevention of displacement, promoting housing stability, producing housing adequate to meet need, ensuring equitable distribution of housing, expanding access to opportunity, reducing GHG emissions through an improved jobs-housing balance, promoting climate resiliency and sustainability, and the prevention of homelessness. The proposed project includes actions the City is undertaking to achieve its housing RHNA targets and also would implement SCAG's land use goals and policies by primarily placing new development in areas with access to transit, jobs and services, thus minimizing vehicle trips and GHG emissions.

Upon its adoption by the City, the 2021-2029 Housing Element would serve as a comprehensive statement of the City's housing policies and as a specific guide for program actions to be taken in support of those policies. The Housing Element Update is a policy document that encourages housing opportunities in infill areas.

Adoption of the 2021-2029 Housing Element would not grant entitlements for any project and future development proposals that are intended to assist in meeting the City's projected housing need, including those facilitated by the Rezoning Program, would be reviewed by the City for consistency with all adopted local and State laws, regulations, standards and policies.

Similar to the 2015 General Plan Update, the 2021-2029 Housing Element and changes to the Land Use, Circulation and Safety Elements would be consistent with all applicable state, regional and local plans and policies. The updates strengthen the consistency of the General Plan and Housing Element and would not conflict with existing plans.

In addition to consistency with all other state, regional and local applicable plans and policies, per Gov. Code, § 65300 et. Seq. a General Plan is required to be internally consistent and all elements of a general plan are prohibited from conflicting with others.

Programs and policies in other elements must not conflict with the Housing Element. A Housing Element affects a locality's policies for growth and residential land uses. To implement the 2021-2029 Housing Element, including strategies to sites necessary to meet the RHNA, the Land Use, Safety and Circulation Elements have been updated to support the implementation of the Updated Housing Element.

Housing Element statutes provide for the use of "default densities" to assess affordability when evaluating the adequacy of sites to address the affordability targets established by the RHNA. Based on its population and location within Los Angeles County, Sierra Madre falls within the default density of a minimum 20 units per acre for providing sites affordable to very low- and low-income households. The City is in the process of developing two new multi-family zoning categories for the rezone sites which meet this minimum default density: R-3-20 would provide for densities of 20-24 units/acre, and R-3-30 would provide for densities of 30-34 units per acre. The City intends to adopt the new zoning designations in conjunction with the 2021-2029 Housing Element and rezoning of the designated properties

The Land Use Element of the General Plan would be updated to reflect the opportunity sites identified in the 2021-2029 Housing Element. This would include establishing two new multi-family residential land use categories (R-3-20 and R-3-30), creating an Affordable Housing Overlay on select congregational sites, along with minor changes to the Land Use table and map to accommodate residential land uses on the opportunity sites.

The purpose of the Safety Element Update is to ensure consistency with the Housing Element Update and to comply with recent State legislation and guidelines (including Assembly Bill 162, Senate Bill 1241, Senate Bill 99, Assembly Bill 747, Senate Bill 1035 and Senate Bill 379). Technical amendments would be made to the Safety Element to achieve compliance with State, regional, and local policies and guidelines. The technical amendments would incorporate data and maps, address vulnerability to climate change; and incorporate policies and programs from the City's Hazard Mitigation Plan. In order to ensure compliance with state law, the City amended the Safety Element to formally integrate related long-range planning efforts. Furthermore, updates to the Safety Element would involve updates to safety policies and requirements to provide consistency with the Housing Element Update, including those related to emergency response as part of the Local Hazard Mitigation Plan, which would provide guidance to minimize impacts associated with hazardous and unsafe conditions. Therefore, the Safety Element Update would not result in any adverse impacts related to land use and planning.

The modifications to the Circulation Element include updates to reflect current conditions and a policy related to the City's adopted vehicle miles traveled (VMT) thresholds as a metric to evaluate environmental impacts of proposed projects. Vehicle miles traveled evaluates the number of miles traveled by each vehicle. This shift in standard is mandated by the State as part of Senate Bill 375 in keeping with the State's goals to reduce greenhouse gas emissions, encourage infill development and improve public health through active transportation (e.g., bicycling and walking). Proposed General Plan Circulation Element policies are shown in Section 3. Proposed General Plan Policies.

New residential development would be required to comply with all applicable plans and regulations including the General Plan and the City's Municipal Code. All future development will go through the design review and site plan review processes to ensure any new structure is harmonious with existing uses. All development projects are subject to environmental review as appropriate in compliance with

CEQA prior to approval. Project and site-specific concerns will be evaluated and addressed as development projects for specific sites are proposed.

Impacts related to conflicts with land use plans, policies, and regulations would be less than significant.

Mitigation Measures:

None required.

4. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Similar to the findings of the 2015 General Plan EIR, all impacts would be less-than significant. No mitigation measures are necessary.

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IV. ENVIRONMENTAL IMPACT ANALYSIS
H. NOISE

1. INTRODUCTION

This section of the SEIR analyzes the potential environmental effects related to noise from implementation of the proposed project.

A. 2015 General Plan EIR Analysis and Conclusions

The 2015 General Plan EIR determined that buildout under the 2015 General Plan Update would result in an increase in traffic on local roadways in the City in a manner that would not substantially increase the existing noise environment. Traffic noise would increase as a result of implementation of the 2015 General Plan Update's proposed Land Use Map, implementation of the circulation plan, and in particular, regional growth. However, affected roadway segments would not experience substantial noise increases existing conditions and no segments with adjacent sensitive receptors that would experience noise increases would fall into the "Normally Unacceptable" or "Clearly Unacceptable" land use categories. Furthermore, the 2015 General Plan Update and Implementation Program include policies and implementation measures designed to minimize traffic-related noise impacts. As such, the 2015 General Plan EIR found that impacts would not be significant.

The 2015 General Plan EIR determined that noise-sensitive land uses would not be exposed to substantial levels of rail or aircraft noise. There are no rail lines through or immediately adjacent to the City, no public or public use airports in or in the general vicinity, and no portions of the City are located within an airport influence area or the noise contours of an airport. As such, the General Plan EIR found that development in accordance with the 2015 General Plan Update would not expose people to excessive rail or airport noise and impacts would be less than significant.

The 2015 General Plan EIR determined that noise-sensitive land uses cold be exposed to elevated noise levels from transportation sources, however, siting of new noise-sensitive land uses would require a separate, project-specific noise study. In addition, impacts from roadway and airport noise would not be significant. Furthermore, the 2015 General Plan Update and Implementation Program include policies and implementation measures designed to minimize noise impacts. As such, the 2015 General Plan EIR found that impacts would not be significant.

The 2015 General Plan EIR determined that noise-sensitive land uses cold be exposed to elevated noise levels from stationary sources. However, the City requires that noise from new stationary sources in the City comply with the City's Noise Ordinance (Section 9.32 [Noise] of the City's Municipal Code), which limits the acceptable noise at the property line of the property producing the noise, to reduce nuisances to sensitive land uses. In addition, development activities on private property, individual commercial or light-manufacturing development projects, that would be accommodated by the General Plan Update would be subject to a project-specific environmental review by the City. Furthermore, the 2015 General Plan Update and Implementation Program include policies and implementation measures designed to minimize noise impacts. As such, the 2015 General Plan EIR found that impacts would not be significant.

The 2015 General Plan EIR determined that construction activities associated with future development that would be accommodated by the 2015 General Plan Update would substantially elevate noise levels in the vicinity of noise-sensitive land uses. Although the General Plan Update and Implementation Program include policies and implementation measures designed to minimize construction-related noise

impacts, because construction activities associated with any individual development may occur near noise-sensitive receptors and noise disturbances may occur for prolonged periods of time, construction noise impacts associated with implementation of the 2015 General Plan Update are considered significant.

The 2015 General Plan EIR determined that construction activities associated with future development that would be accommodated by the 2015 General Plan Update would expose sensitive uses to strong levels of vibration. Depending on the use of equipment and distance to the nearest receptors, the use of heavy equipment during construction would have the potential to cause annoyance and architectural damage at nearby uses, which would be a potentially significant impact.

2. ENVIRONMENTAL SETTING

A. Noise and Vibration Basics

Noise Principles and Descriptors

Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a liquid or gaseous medium (e.g., air). Noise is generally defined as undesirable (i.e., loud, unexpected, or annoying) sound. Acoustics is defined as the physics of sound and addresses its propagation and control.[1] In acoustics, the fundamental scientific model consists of a sound (or noise) source, a receiver, and the propagation path between the two. The loudness of the noise source and obstructions or atmospheric factors affecting the propagation path to the receiver determine the sound level and characteristics of the noise perceived by the receiver.

Sound, traveling in the form of waves from a source, exerts a sound pressure level (referred to as sound level) that is measured in decibels (dB), which is the standard unit of sound amplitude measurement and reflects the way people perceive changes in sound amplitude.[2] The dB scale is a logarithmic scale that describes the physical intensity of the pressure vibrations that make up any sound, with 0 dB corresponding roughly to the threshold of human hearing and 120 and 140 dB corresponding to the thresholds of feeling and pain, respectively. Pressure waves traveling through air exert a force registered by the human ear as sound.[3]

Sound pressure fluctuations can be measured in units of hertz (Hz), which correspond to the frequency of a particular sound. Typically, sound does not consist of a single frequency, but rather a broad band of frequencies varying in levels of magnitude. When all of the audible frequencies of a sound are measured, a sound spectrum is plotted consisting of a range of frequencies spanning 20 to 20,000 Hz. The sound

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[1] *California Department of Transportation, Technical Noise Supplement to the Traffic Noise Analysis Protocol, Section 2.2.1, September 2013.*

[2] *All sound levels measured in decibel (dB), as identified in the noise calculation worksheets included in Appendix of this Draft EIR and in this section of the Draft EIR, are relative to $2x10^{-5}$ N/m^2.*

[3] *California Department of Transportation, Technical Noise Supplement to the Traffic Noise Analysis Protocol, Section 2.1.3, September 2013.*

pressure level, therefore, constitutes the additive force exerted by a sound corresponding to the sound frequency/sound power level spectrum.[4]

The typical human ear is not equally sensitive to the frequency range from 20 to 20,000 Hz. As a consequence, when assessing potential noise impacts, sound is measured using an electronic filter that deemphasizes the frequencies below 1,000 Hz and above 5,000 Hz in a manner corresponding to the human ear's decreased sensitivity to these extremely low and extremely high frequencies. This method of frequency filtering or weighting is referred to as A-weighting, expressed in units of A-weighted decibels (dBA), which is typically applied to community noise measurements.[5] Some representative common outdoor and indoor noise sources and their corresponding A-weighted noise levels are shown in Table IV.H-1, Decibel Scale and Common Noise Sources.

Table IV.H-1
Decibel Scale and Common Noise Sources

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	—110—	Rock Band
Jet Fly-over at 100 feet		
	—100—	
Gas Lawnmower at 3 feet		
	—90—	
		Food Blender at 3 feet
Diesel Truck going 50 mph at 50 feet	—80—	Garbage Disposal at 3 feet
Noisy Urban Area during Daytime		
Gas Lawnmower at 100 feet	—70—	Vacuum Cleaner at 10 feet
Commercial Area		Normal Speech at 3 feet
Heavy Traffic at 300 feet	—60—	
		Large Business Office
Quiet Urban Area during Daytime	—50—	Dishwasher in Next Room
Quiet Urban Area during Nighttime	—40—	Theater, Large Conference Room (background)
Quiet Suburban Area during Nighttime		
	—30—	Library
Quiet Rural Area during Nighttime		Bedroom at Night, Concert Hall (background)
	—20—	
		Broadcast/Recording Studio
	—10—	
Lowest Threshold of Human Hearing	—0—	Lowest Threshold of Human Hearing

Note: Colors are for illustrative purposes only.
Source: Caltrans, Technical Noise Supplement, Page 2-20, September 2013.

[4] *California Department of Transportation, Technical Noise Supplement to the Traffic Noise Analysis Protocol, Section 2.1.3, September 2013.*

[5] *California Department of Transportation, Technical Noise Supplement to the Traffic Noise Analysis Protocol, Section 2.1.3, September 2013.*

Noise Exposure and Community Noise

Community noise exposure is typically measured over a period of time; a noise level is a measure of noise at a given instant in time. Community noise varies continuously over a period of time with respect to the sound sources contributing to the community noise environment. Community noise is primarily the product of many distant noise sources, which constitute a relatively stable background noise exposure, with many unidentifiable individual contributors. Single-event noise sources, such as aircraft flyovers, sirens, etc., may cause sudden changes in background noise level.[6] However, generally, background noise levels change gradually throughout the day, corresponding with the addition and subtraction of distant noise sources, such as changes in traffic volume.

In an outdoor environment, sound energy attenuates through the air as a function of distance. Such attenuation is called "distance loss" or "geometric spreading" and is based on the type of source configuration (i.e., a point source or a line source). The rate of sound attenuation for a point source, such as a piece of mechanical or electrical equipment (e.g., air conditioner or bulldozer), is 6 dBA per doubling of distance from the noise source to the receptor over acoustically "hard" sites (e.g., asphalt and concrete surfaces) and 7.5 dBA per doubling of distance from the noise source to the receptor over acoustically "soft" sites (e.g., soft dirt, grass or scattered bushes and trees).[7] For example, an outdoor condenser fan that generates a sound level of 60 dBA at a distance of 50 feet from a point source at an acoustically hard site would attenuate to 54 dBA at a distance of 100 feet from the point source and attenuate to 48 dBA at 200 feet from the point source. The rate of sound attenuation for a line source, such as a constant flow of traffic on a roadway, is 3 dBA per doubling of distance from the point source to the receptor for hard sites and 4.5 dBA per doubling of distance for soft sites.[8]

Structures (e.g., buildings and solid walls) and natural topography (e.g., hills and berms) that obstruct the line-of-sight between a noise source and a receptor further reduce the noise level if the receptor is located within the "shadow" of the obstruction, such as behind a sound wall. This type of sound attenuation is known as "barrier insertion loss." If a receptor is located behind the wall but still has a view of the source (i.e., the line-of-sight is not fully blocked), barrier insertion loss would still occur but to a lesser extent. Additionally, a receptor located on the same side of the wall as a noise source may actually experience an increase in the perceived noise level as the wall can reflect noise back to the receptor, thereby compounding the noise. Noise barriers can provide noise level reductions ranging from approximately 5 dBA (where the barrier just breaks the line-of-sight between the source and receiver) to an upper range of 20 dBA with a larger barrier.[9] Additionally, structures with closed windows can further attenuate exterior noise by a minimum of 20 dBA to 30 dBA.[10]

These successive additions of sound to the community noise environment change the community noise level from moment to moment, requiring the noise exposure to be measured over periods of time to

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[6] *California Department of Transportation, Technical Noise Supplement to the Traffic Noise Analysis Protocol, Section 2.2.1, September 2013.*

[7] *Caltrans, Technical Noise Supplement (TeNS), 2009, Chapter 2.1.4.2.*

[8] *Caltrans, Technical Noise Supplement (TeNS), 2009, Chapter 2.1.4.2.*

[9] *California Department of Transportation, Technical Noise Supplement to the Traffic Noise Analysis Protocol, Section 2.1.4.4 and Section 5.1.1, September 2013.*

[10] *California Department of Transportation, Technical Noise Supplement to the Traffic Noise Analysis Protocol, Table 7-1, September 2013.*

legitimately characterize a community noise environment and evaluate cumulative noise impacts. The following noise descriptors are used to characterize environmental noise levels over time.[11]

L_{eq}: The equivalent sound level over a specified period of time, typically, 1 hour (L_{eq}). The L_{eq} may also be referred to as the energy-average sound level.

L_{max}: The maximum, instantaneous noise level experienced during a given period of time.

L_{min}: The minimum, instantaneous noise level experienced during a given period of time.

L_x: The noise level exceeded a percentage of a specified time period. For instance, L_{50} and L_{90} represent the noise levels that are exceeded 50 percent and 90 percent of the time, respectively.

L_{dn}: The average A-weighted noise level during a 24-hour day, obtained after an addition of 10 dBA to measured noise levels between the hours of 10:00 P.M. and 7:00 A.M. to account for nighttime noise sensitivity. The L_{dn} is also termed the day-night average noise level (DNL).

CNEL: The Community Noise Equivalent Level (CNEL) is the time average A-weighted noise level during a 24-hour day that includes an addition of 5 dBA to measured noise levels between the hours of 7:00 P.M. and 10:00 P.M. and an addition of 10 dBA to noise levels between the hours of 10:00 P.M. and 7:00 A.M. to account for noise sensitivity in the evening and nighttime, respectively.

Effects of Noise on People

Noise is generally loud, unpleasant, unexpected, or undesired sound that is typically associated with human activity that is a nuisance or disruptive. The effects of noise on people can be placed into four general categories:

- Subjective effects (e.g., dissatisfaction, annoyance);
- Interference effects (e.g., communication, sleep, and learning interference);
- Physiological effects (e.g., startle response); and
- Physical effects (e.g., hearing loss).

Although exposure to high noise levels has been demonstrated to cause physical and physiological effects, the principal human responses to typical environmental noise exposure are related to subjective effects and interference with activities. Interference effects interrupt daily activities and include interference with human communication activities, such as normal conversations, watching television, telephone conversations, and interference with sleep. Sleep interference effects can include both awakening and arousal to a lesser state of sleep.[12]

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[11] *California Department of Transportation, Technical Noise Supplement to the Traffic Noise Analysis Protocol, Section 2.2.2, September 2013.*

[12] *California Department of Transportation, Technical Noise Supplement to the Traffic Noise Analysis Protocol, Section 2.2.1, September 2013.*

The World Health Organization's Guidelines for Community Noise details the adverse health effects of noise, which include hearing impairment, speech intelligibility, sleep disturbance, physiological functions (e.g. hypertension and cardiovascular effects), mental illness, performance of cognitive tasks, social and behavioral effects (e.g. feelings of helplessness, aggressive behavior), and annoyance.[13]

With regard to the subjective effects, an individuals' responses to similar noise events are diverse and influenced by many factors, including the type of noise, the perceived importance of the noise, the appropriateness of the noise to the setting, the duration of the noise, the time of day and the type of activity during which the noise occurs, and individual noise sensitivity. Overall, there is no completely satisfactory way to measure the subjective effects of noise, or the corresponding reactions of annoyance and dissatisfaction on people. A wide variation in individual thresholds of annoyance exists, and different tolerances to noise tend to develop based on an individual's past experiences with noise. Thus, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted (i.e., comparison to the ambient noise environment). In general, the more a new noise level exceeds the previously existing ambient noise level, the less acceptable the new noise level will be judged by those hearing it. With regard to increases in A-weighted noise level, the following relationships generally occur:[14]

- Except in carefully controlled laboratory experiments, a change of 1 dBA in ambient noise levels cannot be perceived.
- Outside of the laboratory, a 3 dBA change in ambient noise levels is considered to be a barely perceivable difference.
- A change in ambient noise levels of 5 dBA is considered to be a readily perceivable difference.
- A change in ambient noise levels of 10 dBA is subjectively heard as doubling of the perceived loudness.

These relationships between change in noise level and human hearing response occur in part because of the logarithmic nature of sound and the dB scale. Because the dBA scale is based on logarithms, two noise sources do not combine in a simple additive fashion, but rather logarithmically. Under the dBA scale, a doubling of sound energy corresponds to a 3 dBA increase. In other words, when two sources are each producing sound of the same loudness, the resulting sound level at a given distance would be approximately 3 dBA higher than one of the sources under the same conditions. For example, if two identical noise sources produce noise levels of 50 dBA, the combined sound level would be 53 dBA, not 100 dBA. Under the dB scale, three sources of equal loudness together produce a sound level of approximately 5 dBA louder than one source, and ten sources of equal loudness together produce a sound level of approximately 10 dBA louder than the single source.[15]

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[13] *Berglund et al, 1999. Guidelines for community noise. World Health Organization. https://apps.who.int/iris/handle/10665/66217.*

[14] *California Department of Transportation, Technical Noise Supplement to the Traffic Noise Analysis Protocol, Section 2.2.1, September 2013.*

[15] *California Department of Transportation, Technical Noise Supplement to the Traffic Noise Analysis Protocol, Section 2.2.1.1, September 2013.*

Noise Attenuation

When noise propagates over a distance, the noise level reduces with distance depending on the type of noise source and the propagation path. Noise from a localized source (i.e., point source) propagates uniformly outward in a spherical pattern, referred to as "spherical spreading." Stationary point sources of noise, including stationary mobile sources such as idling vehicles, attenuate (i.e., reduce) at a rate between 6 dBA for acoustically "hard" sites and 7.5 dBA for "soft" sites for each doubling of distance from the reference measurement, as their energy is continuously spread out over a spherical surface (e.g., for hard surfaces, 80 dBA at 50 feet attenuates to 74 dBA at 100 feet, 68 dBA at 200 feet).[16] Hard sites are those with a reflective surface between the source and the receiver, such as asphalt or concrete surfaces or smooth bodies of water.[17] No excess ground attenuation is assumed for hard sites and the reduction in noise levels with distance (drop-off rate) is simply the geometric spreading of the noise from the source.[18] Soft sites are those that have an absorptive ground surface, such as soft dirt, grass, or scattered bushes and trees, which in addition to geometric spreading, provides an excess ground attenuation value of 1.5 dBA (per doubling distance).[19]

Roadways and highways consist of several localized noise sources on a defined path, and hence are treated as "line" sources, which approximate the effect of several point sources.[20] Noise from a line source propagates over a cylindrical surface, often referred to as "cylindrical spreading."[21] Line sources (e.g., traffic noise from vehicles) attenuate at a rate between 3 dBA for hard sites and 4.5 dBA for soft sites for each doubling of distance from the reference measurement.[22] Therefore, noise due to a line source attenuates less with distance than that of a point source with increased distance.

Receptors located downwind from a noise source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels.[23] Atmospheric temperature inversion (i.e., increasing temperature with elevation) can increase sound levels at long distances. Other

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[16] *California Department of Transportation, Technical Noise Supplement to the Traffic Noise Analysis Protocol, Section 2.1.4.2, September 2013.*

[17] *California Department of Transportation, Technical Noise Supplement to the Traffic Noise Analysis Protocol, Section 2.1.4.2, September 2013.*

[18] *California Department of Transportation, Technical Noise Supplement to the Traffic Noise Analysis Protocol, Section 2.1.4.2, September 2013.*

[19] *California Department of Transportation, Technical Noise Supplement to the Traffic Noise Analysis Protocol, Section 2.1.4.2, September 2013.*

[20] *California Department of Transportation, Technical Noise Supplement to the Traffic Noise Analysis Protocol, Section 2.1.4.1, September 2013.*

[21] *California Department of Transportation, Technical Noise Supplement to the Traffic Noise Analysis Protocol, Section 2.1.4.1, September 2013.*

[22] *California Department of Transportation, Technical Noise Supplement to the Traffic Noise Analysis Protocol, Section 2.1.4.1, September 2013.*

[23] *California Department of Transportation, Technical Noise Supplement to the Traffic Noise Analysis Protocol, Section 2.1.4.3, September 2013.*

factors such as air temperature, humidity, and turbulence can, under the right conditions, also have substantial effects on noise levels.[24]

Vibration Fundamentals

Vibration can be interpreted as energy transmitted in waves through the ground or man-made structures, which generally dissipate with distance from the vibration source. 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. Since energy is lost during its transfer from one particle to another, vibration becomes less perceptible with increasing distance from the source.

As described in the Federal Transit Administration's (FTA) *Transit Noise and Vibration Impact Assessment Manual*, groundborne vibration can be a serious concern for nearby neighbors of a transit system route or maintenance facility, causing buildings to shake and rumbling sounds to be heard.[25] In contrast to airborne noise, groundborne vibration is not a common environmental problem, as it is unusual for vibration from sources such as rubber-tired buses and trucks to be perceptible, even in locations close to major roads. Some common sources of groundborne vibration are trains, heavy trucks traveling on rough roads, and certain construction activities, such as blasting, pile-driving, and operation of heavy earth-moving equipment.[26] Groundborne vibration generated by man-made activities (e.g., road traffic, construction operations) typically weakens with greater horizontal distance from the source of the vibration.

Several different methods are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal in inches per second (in/sec), and is most frequently used to describe vibration impacts to buildings.[27] The root mean square (RMS) amplitude is defined as the average of the squared amplitude of the signal and is most frequently used to describe the effect of vibration on the human body.[28] Decibel notation (VdB) is commonly used to express RMS vibration velocity amplitude. The relationship of PPV to RMS velocity is expressed in terms of the "crest factor," defined as the ratio of the PPV amplitude to the RMS amplitude. PPV is typically a factor of 1.7 to 6 times greater than RMS vibration velocity; FTA uses a crest factor of 4.[29] The decibel notation VdB acts to compress the range of numbers required to describe vibration. Typically, groundborne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. Sensitive receptors for vibration include buildings where vibration would interfere with operations within

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[24] *California Department of Transportation, Technical Noise Supplement to the Traffic Noise Analysis Protocol, Section 2.1.4.3, September 2013.*

[25] *Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual, Section 7, 2018, https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf.*

[26] *Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual, Section 7, 2018.*

[27] *Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual, Section 5.1, 2018.*

[28] *Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual, Section 5.1, 2018.*

[29] *Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual, Section 5.1, 2018.*

the building or cause damage (especially older masonry structures), locations where people sleep, and locations with vibration sensitive equipment.[30]

Groundborne noise specifically refers to the rumbling noise emanating from the motion of building room surfaces due to the vibration of floors and walls; it is perceptible only inside buildings.[31] The relationship between groundborne vibration and groundborne noise depends on the frequency of the vibration and the acoustical absorption characteristics of the receiving room. For typical buildings, groundborne vibration that causes low frequency noise (i.e., the vibration spectrum peak is less than 30 Hz) results in a groundborne noise level that is approximately 50 decibels lower than the velocity level. For groundborne vibration that causes mid-frequency noise (i.e., the vibration spectrum peak is 30 to 60 Hz), the groundborne noise level will be approximately 35 to 37 decibels lower than the velocity level.[32] Therefore, for typical buildings, the groundborne noise decibel level is lower than the groundborne vibration velocity level.

B. Regulatory Setting

1) *Federal*

Noise Control Act of 1972

Under the authority of the Noise Control Act of 1972, the United States Environmental Protection Agency (USEPA) established noise emission criteria and testing methods published in Parts 201 through 205 of Title 40 of the Code of Federal Regulations (CFR) that apply to some transportation equipment (e.g., interstate rail carriers, medium trucks, and heavy trucks) and construction equipment. In 1974, USEPA issued guidance levels for the protection of public health and welfare in residential areas of an outdoor L_{dn} of 55 dBA and an indoor L_{dn} of 45 dBA.[33] These guidance levels are not standards or regulations and were developed without consideration of technical or economic feasibility. There are no federal noise standards that directly regulate environmental noise related to the construction or operation of the Project. Moreover, the federal noise standards are not reflective of urban environments that range by land use, density, proximity to commercial or industrial centers, etc. As such, for purposes of determining acceptable sound levels to determine and evaluate intrusive noise sources and increases, this document utilizes the City of Los Angeles Noise Regulations, discussed below.

Federal Transit Administration Vibration Standards

There are no federal vibration standards or regulations adopted by any agency that are applicable to evaluating vibration impacts from land use development projects such as the proposed Project. However, the Federal Transit Administration (FTA) has adopted vibration criteria for use in evaluating vibration

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[30] *Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual, Section 6.1, 6.2, and 6.3, 2018.*

[31] *Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual, Section 5.4, 2018.*

[32] *Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual, Table 6-3 and Table 6-14, pages 126 and 146, 2018.*

[33] *United States Environmental Protection Agency, EPA Identifies Noise Levels Affecting Health and Welfare, April 1974. https://archive.epa.gov/epa/aboutepa/epa-identifies-noise-levels-affecting-health-and-welfare.html. Accessed January 14, 2021.*

impacts from construction activities.[34] The vibration damage criteria adopted by the FTA are shown in Table IV.H-2, Construction Vibration Damage Criteria. The FTA has adopted groundborne vibration standards that are used to evaluate potential building damage impacts related to construction activities. The groundborne vibration damage criteria adopted by the FTA are shown in Table IV.H-2.

Table IV.H-2
Construction Vibration Damage Criteria

Building Category	PPV (in/sec)
I. Reinforced-concrete, steel, or timber (no plaster)	0.50
II. Engineered concrete and masonry (no plaster)	0.30
III. Non-engineered timber and masonry buildings	0.20
IV. Buildings extremely susceptible to groundborne vibration damage	0.12
Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment, May 2006.	

The FTA has also adopted standards associated with human annoyance for determining the groundborne vibration and noise impacts from ground-borne noise on the following three off-site land-use categories: Vibration Category 1 – High Sensitivity, Vibration Category 2 – Residential, and Vibration Category 3 – Institutional.[35] The FTA defines Category 1 as buildings where vibration would interfere with operations within the building, including vibration-sensitive research and manufacturing facilities, hospitals with vibration-sensitive equipment, and university research operations. Vibration-sensitive equipment includes, but is not limited to, electron microscopes, high-resolution lithographic equipment, and normal optical microscopes. Category 2 refers to all residential land uses and any buildings where people sleep, such as hotels and hospitals. Category 3 refers to institutional land uses such as schools, churches, other institutions, and quiet offices that do not have vibration-sensitive equipment but that still potentially involve activities that could be disturbed by vibration. The vibration thresholds associated with human annoyance for these three land-use categories are shown in Table IV.H-3, Groundborne Vibration and Groundborne Noise Impact Criteria for General Assessment. No thresholds have been adopted or recommended for commercial or office uses.

Table IV.H-3
Groundborne Vibration and Groundborne Noise Impact Criteria for General Assessment

Land Use Category	Frequent Events [a]	Occasional Events [b]	Infrequent Events [c]
Category 1	65 VdB [d]	65 VdB [d]	65 VdB [d]
Category 2	72 VdB	75 VdB	80 VdB
Category 3	75 VdB	78 VdB	83 VdB

a "Frequent Events" is defined as more than 70 vibration events of the same source per day.
b "Occasional Events" is defined as between 30 and 70 vibration events of the same source per day.
c "Infrequent Events" is defined as fewer than 30 vibration events of the same kind per day.
d This criterion is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes.
Source: FTA, Transit Noise and Vibration Impact Assessment Manual, September 2018.

[34] *Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual, Table 7-5, page 186, 2018.*

[35] *Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual, Table 6-1, page 124, 2018.*

Occupational Safety and Health Act of 1970

Under the Occupational Safety and Health Act of 1970 (29 U.S.C. §1919 et seq.), the Occupational Safety and Health Administration (OSHA) has adopted regulations designed to protect workers against the effects of occupational noise exposure. These regulations list permissible noise level exposure as a function of the amount of time during which the worker is exposed. The regulations further specify a hearing conservation program that involves monitoring noise to which workers are exposed, ensuring that workers are made aware of overexposure to noise, and periodically testing the workers' hearing to detect any degradation.[36]

2) *State*

Office of Planning and Research Guidelines for Noise Compatible Land Use

The State of California has not adopted statewide standards for environmental noise, but the Governor's Office of Planning and Research (OPR) has established guidelines for evaluating the compatibility of various land uses as a function of community noise exposure.[37] The purpose of these guidelines is to maintain acceptable noise levels in a community setting for different land use types. Noise levels are divided into four general categories, which vary in range according to land use type: "normally acceptable," "conditionally acceptable," "normally unacceptable," and "clearly unacceptable." The City has developed its own compatibility guidelines in the General Plan, as presented in Table IV.H-4, Guidelines for Noise Compatible Land Use based in part on OPR Guidelines. California Government Code Section 65302 requires each county and city in the State to prepare and adopt a comprehensive long-range general plan for its physical development, with Section 65302(f) requiring a noise element to be included in the general plan. The noise element must: (1) identify and appraise noise problems in the community; (2) recognize Office of Noise Control guidelines; and (3) analyze and quantify current and projected noise levels.

The State has also established noise insulation standards for new multi-family residential units, hotels, and motels. These requirements are collectively known as the California Noise Insulation Standards (Title 24, California Code of Regulations). The noise insulation standards set forth an interior standard of 45 dBA CNEL in any habitable room. The standards require an acoustical analysis demonstrating that dwelling units have been designed to meet this interior standard where such units are proposed in areas subject to exterior noise levels greater than 60 dBA CNEL. Title 24 standards are typically enforced by local jurisdictions through the building permit application process.

Caltrans Vibration/Groundborne Noise Standards

The State of California has not adopted Statewide standards or regulations for evaluating vibration or groundborne noise impacts from land use development projects such as the proposed Project. Although the State has not adopted any vibration standard, Caltrans in its *Transportation and Construction Vibration*

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[36] *United States Department of Labor. OSH Act of 1970. https://www.osha.gov/laws-regs/oshact/completeoshact. Accessed January 14, 2021.*

[37] *State of California, Governor's Office of Planning and Research, General Plan 2017 Guidelines, page 377. http://opr.ca.gov/docs/OPR_COMPLETE_7.31.17.pdf. Accessed January 14, 2021.*

Guidance Manual[38] recommends the following vibration thresholds that are more practical than those provided by the FTA.

Table IV.H-4
Guidelines for Noise Compatible Land Use

Source: Governor's Office of Planning and Research. 2003, October. State of California General Plan Guidelines.

[38] *Caltrans, Transportation and Construction Vibration Guidance Manual, April 2020.*

Table IV.H-5
Guideline Vibration Damage Potential Threshold Criteria

Structure and Condition	Maximum PPV (inch/sec)	
	Transient Sources [1]	Continuous/Frequent Intermittent Sources [2]
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.20	0.10
Historic and some old buildings	0.50	0.25
Older residential structures	0.50	0.30
New residential structures	1.00	0.50
Modern industrial/commercial buildings	2.00	0.50

1 Transient sources create a single, isolated vibration event, such as blasting or drop balls.
2 Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.
Source: Caltrans, Transportation and Construction Vibration Guidance Manual, 2013, Table 19.

3) *Regional*

Los Angeles County Airport Land Use Commission Comprehensive Land Use Plan

In Los Angeles County the Regional Planning Commission has the responsibility for acting as the Airport Land Use Commission and for coordinating the airport planning of public agencies within the county. The Airport Land Use Commission coordinates planning for the areas surrounding public use airports. The Comprehensive Land Use Plan provides for the orderly expansion of Los Angeles County's public use airports and the area surrounding them. It is intended to provide for the adoption of land use measures that will minimize the public's exposure to excessive noise and safety hazards. In formulating the Comprehensive Land Use Plan, the Los Angeles County Airport Land Use Commission has established provisions for safety, noise insulation, and the regulation of building height within areas adjacent to each of the public airports in the County.

4) *Local*

City of Sierra Madre Municipal Code

Section 9.32 (Noise) of the City's Municipal Code includes the City's noise standards to regulate noise sources within the city. Per Section 9.32, the limit for noise sources affecting residential properties is 6 dB above the local ambient noise level, 8 dB above the local ambient noise level for sources on commercial or industrial property, and 15 dB above the local ambient noise level for sources on public property. Additionally, it is unlawful for any person to create any noise that causes a disturbance to any school, institution of learning, church, or hospital, or to create noise which unreasonably disturbs the peace and quiet of any neighborhood or which causes discomfort or annoyance to any reasonable person. However, any noise source that produces a noise level below 80 dBA at a distance of 25 feet is exempt between the hours of 7:00 AM and 9:00 PM on Monday through Saturday, and between 10:00 AM and 6:00 PM on Sundays and holidays. These standards do not gauge the compatibility of developments in the noise environment but provide restrictions on the amount of noise generated at a property, as measured at the property line of the noise receptor. This Chapter also regulates the hours of construction noise.

Construction Noise Hours

Noise sources associated with construction activity are exempt from the noise standards presented in Table 5.10-3, provided said activities take place only between the hours of 7:00 AM and 7:00 PM on Monday through Saturday, between the hours of 10:00 AM and 6:00 PM on a Sunday or holiday, and provided noise levels outside the property do not exceed 85 dBA. Per Section 9.32.090 (Exception Permits) of the City's Municipal Code, if a project applicant can demonstrate to the City Manager that a diligent investigation of available noise abatement techniques indicates that immediate compliance with the regulations would be impractical or unreasonable, a permit to allow exception may be issued, with appropriate conditions to minimize the public detriment caused by such exceptions. Any such permit shall be of as short duration as possible up to three months, but renewable upon a showing of good cause.

City of Sierra Madre 2015 General Plan

The following are relevant policies and implementation measures of the Sierra Madre General Plan and Implementation Program.

General Plan Policies

Land Use Element

- Policy L3.1: Maintain an area in the City for commercial development through the review and update of appropriate standards and regulations for new construction.
- Policy L37.7: Accommodate housing units (i) on the second level, or to the rear of buildings provided that the impacts of noise, odor, and other adverse characteristic of commercial activity can be adequately mitigated, and a healthy, safe, and well-designed environment is achieved for the residential units, and (ii) in the easterly third of the Artisan Mixed-Use area.
- Policy L37.8: Ensure that all development and new uses are compatible with adjacent uses, and yield no significant negative impacts to noise, air quality, water quality and traffic.
- Policy L38.2: Adopt an Artisan Mixed Use Zoning Ordinance to regulate commercial, light-manufacturing and residential uses.
- Policy L38.3: Require the issuance of a conditional use permit for new uses to adequately protect adjacent uses.
- Policy L53.1: Develop a comprehensive Citywide approach to residential street traffic calming.
- Policy L53.4: Install and maintain traffic calming measures where appropriate.

Hazard Prevention Element

- Policy Hz14.1: Formulate measures to mitigate noise impacts from mobile and stationary noise sources through compatible land use planning and the discretionary review of development projects.
- Policy Hz14.2: Identify and control the noise levels associated with transportation and general circulation patterns in the City to ensure the residential quality of the community.

- Policy Hz14.3: Enact noise regulations to prohibit unnecessary excessive and annoying noise sources. These controls currently relate to the general category of disturbing- the-peace nuisances.
- Policy Hz14.4: Ensure that the noise level of the commercial districts does not interfere with the normal business, commercial or residential activities.
- Policy Hz14.5: To the extent possible, protect schools, hospitals, libraries, churches, parks, and recreational areas from excessive sound levels so as not to adversely affect their normal activities.
- Policy Hz14.6: Review current guidelines regarding the use of gas powered lawn equipment and consider restricting the type of equipment, hours and duration of operation.
- Policy Hz15.1: Require that commercial uses developed as part of a residential mixed-use project are not noise intensive.
- Policy Hz15.2: Design mixed-use structures to prevent the transfer of noise from the commercial use to the residential use.
- Policy Hz15.3: Require that common walls and floors between commercial and residential uses be constructed to minimize the transmission of noise and vibration.
- Policy Hz16.1: Limit construction activities to reasonable weekday and weekend/holiday hours in order to reduce noise impacts on adjacent residences.
- Policy Hz16.2: Require that construction activities incorporate feasible and practical techniques to minimize the noise impacts on adjacent uses.

Implementation Program Measures

Noise Implementation Program

- Measure IM-1: The City shall review its zoning ordinances and amend as necessary to include measures to mitigate noise impacts from mobile and stationary noise sources.
- Measure IM-2: The City shall identify opportunities to control noise levels associated with vehicular traffic throughout the City.
- Measure IM-3: The City shall amend its Noise Ordinance as needed to prohibit unnecessary excessive and annoying noise sources.
- Measure IM-4: The City shall continue to enforce its Noise Ordinance to ensure that noise levels in the commercial areas do not interfere with the normal business, commercial and residential activities.
- Measure IM-5: The City shall continue to enforce its Noise Ordinance to protect schools, hospitals, libraries, churches, parks and recreational areas from excessive sound levels.
- Measure IM-6: The City shall consider amending its Noise Ordinance to further restrict the use of gas powered lawn equipment.
- Measure IM-7: The City shall amend the Commercial Zone Ordinance to exclude noise-intensive uses that may be allowed in mixed-use projects.

- Measure IM-8: The City shall amend the Commercial Zone Ordinance to require that mixed-use projects be designed to prevent the transfer of noise between the commercial and residential uses.
- Measure IM-9: The City shall continue to limit construction activities to reasonable weekday and weekend/holiday hours to reduce noise impacts to residential uses, and enforce noise regulations addressing construction activities.

C. Existing Conditions

1) *Existing Noise Environment*

The most common and significant source of noise to the project sites is traffic. Michillinda Avenue, Baldwin Avenue, Grandview Avenue, and Sierra Madre Boulevard are the most significant sources of transportation noise. Commercial uses, primarily on Sierra Madre Boulevard between Lima Street and Mountain Trail Avenue generate stationary-source noise that impacts Site 3.

Local Noise Monitoring Data

PlaceWorks conducted noise measurements at several locations on Tuesday November 1, 2011, and Wednesday, November 2, 2011. Locations ST-1 to ST-3 were each taken for a period of 24 hours and locations ST-4 to ST-7 were each taken for a period of 15 minutes. The noise monitoring results are described below:

Site 1 (Long-term). At the building façade of The British Home, at 647 Manzanita Avenue, approximately 50 feet from the street curb. Noise levels were primarily influenced by local traffic on Manzanita Avenue during the daytime. This location was near the southern border of the city and along a relatively untraveled and quiet roadway. The aim was to capture influences, if any, from I-210 traffic, which is farther to the south.

Site 2 (Long-term). In the downtown commercial district, located at the building façade at 33 E. Sierra Madre Boulevard. Noise levels were primarily influenced by traffic during the morning and afternoon traffic peak hour. This location was near the intersection of the two major roadways in the City, Sierra Madre Boulevard and Baldwin Avenue, to focus on local roadway traffic noise patterns as well as thee downtown commercial and retail districts. The selected location had excellent line-of-sight 'contact' to the intersection.

Site 3 (Long-term). At 273 Highland Avenue. Noise levels were primarily influenced by traffic on Highland Avenue. This location was a typical residential location, representative of the overall city and without undue influences from freeway traffic, major local roadway traffic, and/or special uses such as schools, parks, or commercial/retail land uses.

Site 4 (Short-term). At the front yard of 618 North Auburn Avenue, approximately 20 feet from the road. The highest levels occurred due to local vehicular traffic, landscaping activities and helicopter flyovers. This location assessed the noise environment in the western up-slope and foothill areas of the city.

Site 5 (Short-term). At the front yard of 450 Churchill Road, approximately 20 feet from the road. The highest levels occurred due to vehicular traffic, landscaping activities, and dogs barking. This location was east of Mountain Trail Avenue and was another up slope/foothill measurement site. While farthest from I-210, up-slope locations such as this one may experience freeway noise contributions in the distance since they are elevated above the rest of the cityscape.

Site 6 (Short-term). At the corner of Sunnyside Avenue and Highland Avenue, approximately 20 feet from the road. The highest levels occurred due to vehicular traffic and helicopter fly-overs. This location was a typical residential location, representative of the western portion of the city and near a school facility.

Site 7 (Short-term). At Sierra Vista Park near the playground area, approximately 100 feet from the road. The highest levels occurred due to local vehicular traffic and activities at the playground area. This was a typical location along a primary local roadway, as well as indicative of a park use.

The results of the short-term noise measurements taken and their locations are presented in Table IV.H-6.

Table IV.H-6
Short-Term Noise Level Measurements

Noise Monitoring Location[1]	Time	L_{eq}	L_{min}	L_{max}
4	12:08-12:24 PM	42.6	32.3	62.7
5	12:33-12:50 PM	44.3	34.4	59.0
6	2:31-2:47 PM	62.7	40.6	81.3
7	3:00-3:16 PM	59.1	44.9	73.9

[1] *See Figure IV.H-1, Noise Monitoring Locations.*

As shown in Table IV.H-6, the average noise levels during the daytime at the monitoring locations where the short-term measurements were taken ranged from 42.6 to 62.7 dBA Leq. During the noise monitoring and field reconnaissance, it was observed that the existing noise levels in the city are dominated mostly by traffic noise. Secondary noise sources included dogs, aircraft, helicopters, landscaping activities, and children playing. As mentioned previously, such sources are common in urban areas and inherent to a typical community noise environment. The highest noise levels were observed in areas near Sunnyside Avenue, Highland Avenue, and Sierra Vista Park.

Long-term locations were monitored for a period of 24-hours. As shown in Table 5.8-7, the 24-hour noise levels ranged from 51.1 to 62.1 dBA CNEL. At all locations, noise was dominated by traffic. The noise pattern observed is typical of street traffic with the highest levels close to AM and PM peak traffic hours.

Table IV.H-7
Long-Term Noise Level Measurements

Noise Monitoring Location [1]	CNEL	Highest 1-hour L_{eq}	Hour	Lowest 1-hour L_{eq}	Hour
1	58.6	55.8	2 PM	46.4	2 AM
2	62.1	63.8	4 PM	46.6	2 AM
3	51.1	52.5	8 AM	39.9	2 AM

[1] *See **Figure IV.H-1, Noise Monitoring Locations**.*

Existing Traffic Noise Projections

Traffic data taken from the 2015 General Plan was projected to 2021 using a 0.5% growth factor to establish the existing noise contours near the project sites and around the City. These levels were estimated using the methodology of the Federal Highway Administration (FHWA) Traffic Noise Model (TNM) (FHWA-RD-77-108). The FHWA model arrives at the predicted noise level through a series of

adjustments to the Reference Energy Mean Emission Level (REMEL). Traffic information from the General Plan Traffic Impact Study Draft Report was utilized for modeling purposes. Inputs for the model including road classification, speed, land distance, and vehicle mix were taken from the noise modeling for the General Plan Draft EIR Noise Background and Technical Analysis appendix.

Table IV.H-8
Existing Noise Contours

ROADWAY	SEGMENT	DAILY TRAFFIC VOLUMES	NOISE LEVEL AT 50 FT. (dBA CNEL)	DISTANCE TO NOISE CONTOUR (FT.)			
				70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Michillinda Ave	Edgeview Dr to Grandview Ave	3,600	61.0	6	20	63	198
Michillinda Ave	Grandview Ave to Highland Ave	6,800	63.7	12	37	119	375
Michillinda Ave	Highland Ave to Mariposa Ave	11,400	66.0	20	63	199	629
Michillinda Ave	Mariposa Ave to Orange Grove Ave	13,300	66.7	23	73	232	733
Baldwin Ave	Grandview Ave to Victoria Lane	3,900	59.8	5	15	47	150
Baldwin Ave	Victoria Lane to Sierra Madre Blvd	7,400	60.8	6	19	60	190
Baldwin Ave	Sierra Madre Blvd to Lowell Ave	8,300	64.6	14	46	145	458
Baldwin Ave	Lowell Ave to Orange Grove Ave	10,800	65.8	19	60	188	595
Grandview Ave	Michillinda Ave to Sunnyside Ave	3,100	58.8	4	12	38	119
Grandview Ave	Sunnyside Avenue to Lima Street	4,600	60.5	6	18	56	177
Grandview Ave	Lima Street to Baldwin Ave	4,700	60.6	6	18	57	181
Grandview Ave	Baldwin Ave to Mountain Trail Ave	4,000	59.9	5	15	49	154
Grandview Ave	Mountain Trail Ave to Coburn Ave	3,400	59.2	4	13	41	131
Grandview Ave	Coburn Ave to Olivera Lane	2,800	58.3	3	11	34	108
Grandview Ave	Olivera Lane to Santa Anita Ave	2,300	57.5	3	9	28	88
Sierra Madre Blvd	Michillinda Ave to Sunnyside Ave	8,900	63.4	11	34	108	342
Sierra Madre Blvd	Sunnyside Ave to Lima Street	10,600	64.1	13	41	129	408
Sierra Madre Blvd	Lima Street to Baldwin Ave	10,000	63.9	12	38	122	385
Sierra Madre Blvd	Baldwin Ave to Mountain Trail Ave	7,000	62.3	9	27	85	269
Sierra Madre Blvd	Mountain Trail Ave to Coburn Ave	6,400	61.9	8	25	78	246
Sierra Madre Blvd	Coburn Ave to Olivera Lane	3,700	59.5	4	14	45	142
Orange Grove Ave	Michillinda Ave to Sunnyside Ave	6,300	63.4	11	35	110	347
Orange Grove Ave	Sunnyside Ave to Baldwin Ave	7,100	63.9	12	39	124	391
Orange Grove Ave	Baldwin Ave to S Canon Ave	6,200	63.3	11	34	108	342
Orange Grove Ave	S Coburn Ave to Olivera Lane	4,700	62.1	8	26	82	259

Site B is currently within the conditionally acceptable range at 66.0 dBA CNEL. All other project areas are within the normally acceptable range for their respective land uses.

On-Road Vehicles

Mobile sources of noise, especially cars, and trucks, are the most common and significant sources of noise in most communities and are the predominant source of noise in the city. There are no major highways, freeways, or other transportation traversing Sierra Madre. All roads within the city have two lanes and

speed limits of 35 miles per hour or less. The major thoroughfares are Baldwin Avenue, Michillinda Avenue, Sierra Madre Boulevard, and Orange Grove Avenue. I-210 is approximately 0.6 to 1.25 miles south of the southern City boundary; however, as noted above in in the *Existing Conditions* section, many residents of the City consider the freeway to be a significant noise source because of being able to hear freeway traffic noise due to localized topographical features or during specific weather conditions.

Rail Noise

There are no rail lines that run through the city or are near the city limits. Rail noise is not considered to be a significant factor for the community noise environment of the city.

Aircraft Noise

There are no public or public-use airports within or in the general vicinity of Sierra Madre. The closest airport is El Monte Airport, located approximately five miles to the south. Occasional overflights may be heard but are not considered to be a significant factor for the community noise environment of the City.

Stationary Sources of Noise

Whereas mobile-source noise affects many receptors along an entire length of roadway, stationary noise sources affect only their immediate areas. Many processes and activities in cities produce stationary noise, most notably, the operation of commercial, warehousing, industrial uses, schools, and at-grade railroad crossings. Noise exposure within industrial facilities is controlled by federal and state employee health and safety regulations. Noise levels outside of industrial and other facilities are subject to local standards.

There are some light manufacturing uses within the city; these occur mostly along East Montecito Avenue, west of Baldwin Avenue. Most of the city's commercial uses are located on Sierra Madre Boulevard between Lima Street and Mountain Trail Avenue, with some along Montecito Avenue, east of Baldwin Avenue. Schools are considered noise-sensitive because of the necessity for quiet in the classroom to provide an adequate environment for learning. However, outdoor activities that occur on school campuses throughout the city can generate noticeable levels of noise. While it is preferable to have schools in residential areas to support the neighborhood, noise generated on both the weekdays (by physical education classes and sports programs) and weekends (by use of the fields by youth organizations) can elevate noise levels at adjacent receptor areas.

Vibration

The primary existing source of vibration in the city is truck traffic along the city's roadways. Perceptible vibration levels may be caused by heavy trucks hitting discontinuities in the pavement from gaps and potholes. Under normal conditions with well-maintained asphalt, vibration levels are usually not perceptible beyond the road right-of-way. There are no known major sources of vibration such as heavy industrial equipment that would cause substantial levels of vibration to nearby sensitive uses.

2) *Housing Element Project Sites*

Site 1

Site 1 is located at the northeast corner of Lima Street and Mariposa Avenue. The nearest sensitive receptors include the single-family residential dwelling units located approximately 60 feet to the east (across Lima Street) and 60 feet south (across Mariposa Avenue) of the project site.

Site 2

Site 2 is located along the southern side of Suffolk Avenue between Baldwin Avenue and Sierra Place. The nearest sensitive receptors include the single-family residential uses located adjacent to the east and south of the site. In addition, multi-family residential uses located approximately 60 feet north (across Suffolk Avenue) and the single-family residential uses located approximately 75 feet west of the site (across Baldwin Avenue).

Site 3

Site 3 is located at 491 W Sierra Madre Boulevard. The nearest sensitive receptors to Site 3 include the single-family residential uses located adjacent to the north and the multi-family residential uses located adjacent to the east and west and approximately 80 feet south (across Sierra Madre Boulevard).

Site 4

Site 4 is located at 215 N Baldwin Avenue. The nearest sensitive receptors to Site 4 include the single-family and multi-family residential uses located adjacent to the south and east of the project site. In addition, single-family residential uses are located approximately 50 feet north (across W Laurel Avenue) and a Gooden School is located approximately 75 feet southeast (across Baldwin Avenue) of the project site.

Site A

Site A is located within a portion of the property associated with the St. Rita Catholic Church and School. The nearest sensitive receptors include the school associated with the St. Rita Catholic Church which is located adjacent to the northeast and the single-family residential uses located adjacent to the east of the project site. Single-family and multi-family residential uses are also located approximately 60 feet south (across Grandview Avenue) and 60 feet north (across Alegria Avenue) of Site A.

Site B

Site B is located at 695 W Sierra Madre Boulevard within a portion of the property associated with the United Methodist Church. The nearest sensitive receptors to Site B include the single-family residential use located adjacent to the east and the multi-family residential uses located adjacent to the southeast. In addition, single-family residential uses are located approximately 55 feet north (across Montecito Avenue) of the project site.

Site C

Site C is located within a portion of the property associated with Old North Church. The nearest sensitive receptors to Site C include the single-family residential uses located adjacent to the north and east of the project site. Multi-family and single-family residential uses are located approximately 50 feet west (across Hermosa Avenue) and multi-family residential uses are also located approximately 75 feet east of the project site.

Site D

Site D is located within a portion of the property associated with Bethany Church. The nearest sensitive receptors to Site D include the multi-family residential uses located adjacent to the west and the single-

family residential use adjacent to the southeast of the project site. In addition, single-family residential uses are located approximately 60 feet north (across Highland Avenue) and 40 feet south (across Montecito Avenue).

The Meadows

The Meadows is located within the lower 20 acres of the existing Mater Dolorosa Passionist Retreat Center property. The nearest sensitive receptors to The Meadows include the single-family residential uses located adjacent to the west, south, and southeast of the project site.

Stonegate

Stonegate is part of the One Carter property located at the northern terminus of North Baldwin Avenue. The nearest sensitive receptors to Stonegate include the single-family residential uses located adjacent to the west, south, and east of the project site.

3. ENVIRONMENTAL IMPACTS AND MITIGATIONS

A. Threshold of Significance

Appendix G of the CEQA Guidelines provides thresholds address impacts related to noise. Specifically, the Guidelines state that the proposed project may have an adverse significant noise impact if it would result in:

a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
b) Generation of excessive groundborne vibration or groundborne noise levels;
c) For a project located within the vicinity of a private airstrip or 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.

B. Project Impacts and Mitigation Measures

Impact H-1: Would the project generate substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Impact Analysis

Traffic Noise

The 2015 General Plan EIR determined that buildout under the 2015 General Plan Update would result in an increase in traffic on local roadways in the City; however, affected roadway segments would not experience substantial noise increases existing conditions and no segments with adjacent sensitive receptors that would experience noise increases would fall into the “Normally Unacceptable” or “Clearly Unacceptable” land use categories. As such, the 2015 General Plan EIR found that impacts would not be significant.

The development of the opportunity sites would cause increases in traffic along local roadways and would increase the ambient noise level. A significant impact would occur if the future ambient level within the

city falls within the Normally Unacceptable or Clearly Unacceptable levels or if the roadways CNEL levels increased by more the 3 dB. The Normally Unacceptable threshold for all segments analyzed is 70 dBA CNEL.

The potential off-site noise impacts caused by the increase in vehicular traffic as a result of the project were calculated at a distance of 50 feet. The distance to the 55, 60, 65, and 70 dBA CNEL noise contours are also provided for reference. The noise level at 50 feet is representative of approximate distances to existing land uses along the subject roadway. The noise contours were calculated for the following scenarios and conditions:

- Year 2021 Condition: This scenario refers to the 2021 traffic noise condition.
- Year 2029 Condition: This scenario refers to the 2029 traffic noise condition. This condition includes the trips from the General Plan buildout and the Stonegate and Meadows projects.
- Year 2029 Plus Project Condition: This scenario refers to the 2029 plus project traffic noise condition. This condition also includes the trips from the General Plan buildout.

Without Project Scenario

Year 2021 and Year 2029 and the resulting increase without the project are shown in Table IV.H-9. Table IV.H-9 shows that traffic noise increases without the project from 2021 to 2029 would be up to 1.7 dBA CNEL. This increase includes a 0.5% growth rate and the implementation of the General Plan and Stonegate and Meadows projects. There are no segments that would increase greater than 3 dB. Therefore, similar to the findings of the 2015 General Plan EIR, this impact is less than significant.

Table IV.H-9
Traffic Noise Increase without Project

ROADWAY	SEGMENT LIMITS	2021	2029 w/out Project	Increase without Project	Potentially Significant?
Michillinda Avenue	Edgeview Drive to Grandview Avenue	61.0	61.2	0.2	No
Michillinda Avenue	Grandview Avenue to Highland Avenue	63.7	63.9	0.2	No
Michillinda Avenue	Highland Avenue to Mariposa Avenue	66.0	66.4	0.4	No
Michillinda Avenue	Mariposa Avenue to Orange Grove Avenue	66.7	67.2	0.5	No
Baldwin Avenue	Grandview Avenue to Victoria Lane	59.8	61.5	1.7	No
Baldwin Avenue	Victoria Lane to Sierra Madre Boulevard	60.8	62.1	1.3	No
Baldwin Avenue	Sierra Madre Boulevard to Lowell Avenue	64.6	65.6	1.0	No
Baldwin Avenue	Lowell Avenue to Orange Grove Avenue	65.8	66.4	0.6	No
Grandview Avenue	Michillinda Avenue to Sunnyside Avenue	58.8	58.9	0.1	No
Grandview Avenue	Sunnyside Avenue to Lima Street	60.5	60.7	0.2	No
Grandview Avenue	Lima Street to Baldwin Avenue	60.6	60.8	0.2	No
Grandview Avenue	Baldwin Avenue to Mountain Trail Avenue	59.9	60.1	0.2	No
Grandview Avenue	Mountain Trail Avenue to Coburn Avenue	59.2	60.0	0.8	No
Grandview Avenue	Coburn Avenue to Olivera Lane	58.3	58.5	0.2	No
Grandview Avenue	Olivera Lane to Santa Anita Avenue	57.5	57.7	0.2	No
Sierra Madre Boulevard	Michillinda Avenue to Sunnyside Avenue	63.4	63.8	0.4	No

Sierra Madre Boulevard	Sunnyside Avenue to Lima Street	64.1	64.7	0.6	No
Sierra Madre Boulevard	Lima Street to Baldwin Avenue	63.9	64.5	0.6	No
Sierra Madre Boulevard	Baldwin Avenue to Mountain Trail Avenue	62.3	63.2	0.8	No
Sierra Madre Boulevard	Mountain Trail Avenue to Coburn Avenue	61.9	62.4	0.5	No
Sierra Madre Boulevard	Coburn Avenue to Olivera Lane	59.5	60.4	0.9	No
Orange Grove Avenue	Michillinda Avenue to Sunnyside Avenue	63.4	63.6	0.1	No
Orange Grove Avenue	Sunnyside Avenue to Baldwin Avenue	63.9	64.5	0.5	No
Orange Grove Avenue	Baldwin Avenue to S Canon Avenue	63.3	63.9	0.5	No
Orange Grove Avenue	S Coburn Avenue to Olivera Lane	62.1	62.8	0.7	No

With Project Scenario

Year 2021 and Year 2029 plus Project and the resulting increase with the project are shown in Table 6. Table IV.H-10 shows that traffic noise increases without the project from 2021 to 2029 with the project would be up to 2.4 dBA CNEL. This increase includes a 0.5% growth rate and the implementation of the General Plan, the Stonegate and Meadows projects, and Areas 1-5 and A-D. There are no segments that would increase greater than 3 dB. Therefore, similar to the findings of the 2015 General Plan EIR, this impact is less than significant.

Table IV.H-10
Traffic Noise Increase with Project

ROADWAY	SEGMENT LIMITS	2021	2029 with Project	Increase with Project	Potentially Significant?
Michillinda Avenue	Edgeview Drive to Grandview Avenue	61.0	61.2	0.2	No
Michillinda Avenue	Grandview Avenue to Highland Avenue	63.7	63.9	0.2	No
Michillinda Avenue	Highland Avenue to Mariposa Avenue	66.0	66.5	0.5	No
Michillinda Avenue	Mariposa Avenue to Orange Grove Avenue	66.7	67.3	0.7	No
Baldwin Avenue	Grandview Avenue to Victoria Lane	59.8	62.1	2.4	No
Baldwin Avenue	Victoria Lane to Sierra Madre Boulevard	60.8	62.6	1.8	No
Baldwin Avenue	Sierra Madre Boulevard to Lowell Avenue	64.6	66.0	1.3	No
Baldwin Avenue	Lowell Avenue to Orange Grove Avenue	65.8	66.6	0.8	No
Grandview Avenue	Michillinda Avenue to Sunnyside Avenue	58.8	58.9	0.1	No
Grandview Avenue	Sunnyside Avenue to Lima Street	60.5	60.7	0.2	No
Grandview Avenue	Lima Street to Baldwin Avenue	60.6	60.8	0.2	No
Grandview Avenue	Baldwin Avenue to Mountain Trail Avenue	59.9	60.1	0.2	No
Grandview Avenue	Mountain Trail Avenue to Coburn Avenue	59.2	60.3	1.1	No
Grandview Avenue	Coburn Avenue to Olivera Lane	58.3	58.5	0.2	No
Grandview Avenue	Olivera Lane to Santa Anita Avenue	57.5	57.7	0.2	No
Sierra Madre Boulevard	Michillinda Avenue to Sunnyside Avenue	63.4	63.9	0.5	No
Sierra Madre Boulevard	Sunnyside Avenue to Lima Street	64.1	64.9	0.8	No
Sierra Madre Boulevard	Lima Street to Baldwin Avenue	63.9	64.7	0.8	No
Sierra Madre Boulevard	Baldwin Avenue to Mountain Trail Avenue	62.3	63.4	1.1	No
Sierra Madre Boulevard	Mountain Trail Avenue to Coburn Avenue	61.9	62.6	0.7	No

Sierra Madre Boulevard	Coburn Avenue to Olivera Lane	59.5	60.7	1.1	No
Orange Grove Avenue	Michillinda Avenue to Sunnyside Avenue	63.4	63.6	0.1	No
Orange Grove Avenue	Sunnyside Avenue to Baldwin Avenue	63.9	64.6	0.7	No
Orange Grove Avenue	Baldwin Avenue to S Canon Avenue	63.3	64.1	0.7	No
Orange Grove Avenue	S Coburn Avenue to Olivera Lane	62.1	63.1	0.9	No

Updates to the Safety Element would serve to reduce the City's risks from wildfire and primarily involves limitations on the types of developments within areas of increased fire hazards and vegetation maintenance and would not have the potential to generate traffic noise within the city.

Updates to the Circulation Element are primarily ministerial and pertain to the city's approach for analyzing transportation-related environmental impacts and would not have the potential to generate traffic noise.

Construction Noise:

The 2015 General Plan EIR determined that construction activities associated with future development that would be accommodated by the 2015 General Plan Update would substantially elevate noise levels in the vicinity of noise-sensitive land uses. Although the General Plan Update and Implementation Program included policies and implementation measures designed to minimize construction-related noise impacts, because construction activities associated with any individual development may occur near noise-sensitive receptors and noise disturbances may occur for prolonged periods of time, construction noise impacts associated with implementation of the 2015 General Plan Update are considered significant.

The loudest expected piece of equipment for development on the opportunity sites would be 85 dBA at 50 feet (concrete mixer, dozer, grader, paver, etc.). Given a usage factor of 50% per the Federal Highway Road Noise Construction Model, the maximum Leq level for one piece of equipment is 82 dBA at 50 feet. In the likely scenario that two pieces of equipment are operating simultaneously 50 feet from the same point on the property line, the overall level would be 85 dBA, Leq which is the City's construction limit.

Therefore, similar to the findings of the 2015 General Plan EIR, construction noise has the potential for a significant impact if multiple pieces of construction equipment operate at the same time within 50 feet of the same point on a property line.

Updates to the Safety Element would serve to reduce the City's risks from wildfire and primarily involves limitations on the types of developments within areas of increased fire hazards and vegetation maintenance and would not have the potential to generate construction noise.

Updates to the Circulation Element are primarily ministerial and pertain to the city's approach for analyzing transportation-related environmental impacts and would not have the potential to impact construction noise within the city.

Mitigation Measures:

To reduce impacts from construction noise, the 2015 General Plan Update EIR included the following measures:

NOI-1: GP EIR MM 5.10-5

10-1. Construction contractors shall:

1. Require that construction vehicles and equipment (fixed or mobile) be equipped with properly operating and maintained mufflers.

2. Restrict haul routes and construction-related traffic.

3. Place stock piling and/or vehicle-staging areas as far as practical from residential uses.

4. Replace audible backup warning devices with strobe lights or other warning devices during evening construction activity to the extent permitted by the California Division of Occupational Safety and Health.

5. Reduce nonessential idling of construction equipment to no more than five minutes.

6. Consider the installation of temporary sound barriers for construction activities that are adjacent to occupied noise-sensitive structures when construction activity with multiple pieces of equipment occurs within 50 feet of a sensitive property line. Barriers should block the line of sight.

Future development on the opportunity sites would be required to comply with NOI-1; however, due to the potential for proximity of construction activities to sensitive uses and potential longevity of construction activities, and despite the application of mitigation measures, similar to the findings of the 2015 General Plan EIR, this impact would be significant even with mitigation incorporated.

Impact H-2: Would the project generate excessive groundborne vibration or groundborne noise levels?

Impact Analysis:

The 2015 General Plan EIR determined that construction activities associated with future development that would be accommodated by the 2015 General Plan Update would expose sensitive uses to strong levels of vibration. Depending on the use of equipment and distance to the nearest receptors, the use of heavy equipment during construction would have the potential to cause annoyance and architectural damage at nearby uses, which would be a potentially significant impact.

Construction on the opportunity sites would not create groundborne noise. This impact would be less than significant.

To avoid structural damage, bulldozers should not come within 15 feet of fragile buildings or within 8 feet of older residential structures and historic buildings. Daytime residential annoyance, defined by the FTA as 78 VdB, would occur at 50 feet from a bulldozer. Construction activity is not anticipated to be vibration-intensive including the use of blasting, pile driving, and vibratory rollers within 20 feet of sensitive receptors. However, similar to the findings of the 2015 General Plan EIR, depending on the use of equipment and distance to the nearest receptors, the use of heavy equipment during construction would have the potential to cause annoyance and architectural damage at nearby uses, which would be a significant impact.

Updates to the Safety Element would serve to reduce the City's risks from wildfire and primarily involves limitations on the types of developments within areas of increased fire hazards and vegetation

maintenance and would not have the potential to generate groundborne vibration or noise within the city.

Updates to the Circulation Element are primarily ministerial and pertain to the city's approach for analyzing transportation-related environmental impacts and would not have the potential to generate groundborne vibration or noise.

Mitigation Measures:

NOI-2: GP EIR MM 5.10-6

> **10-2.** Individual development projects that involve vibration-intensive construction activities—such as blasting, pile drivers, jack hammers, and vibratory rollers—within 200 feet of sensitive receptors shall be evaluated for potential vibration impacts. A construction-related vibration study shall be conducted for individual development projects where vibration-intensive impacts may occur. If construction-related vibration is determined to be perceptible at vibration-sensitive uses, additional requirements, such as use of less-vibration-intensive equipment or construction techniques, shall be implemented during construction (e.g., nonexplosive blasting methods, drilled piles as opposed to pile driving, etc.).

Future development on the opportunity sites would be required to comply with NOI-2; however, due to the potential for proximity of construction activities to sensitive uses and potential longevity of construction activities, and despite the application of mitigation measures, similar to the findings of the 2015 General Plan EIR, this impact would be significant even with mitigation incorporated.

Impact H-3: For a project located within the vicinity of a private airstrip or 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?

Impact Analysis

There are no public or public-use airports within or in the general vicinity of Sierra Madre. Therefore, similar to the findings of the 2015 General Plan EIR, this impact is less than significant.

Mitigation Measures:

None required.

4. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Due to the potential for proximity of construction activities to sensitive uses and potential longevity of construction activities, and despite the application of mitigation measures, similar to the findings of the 2015 General Plan EIR, impacts from construction noise and vibration would be significant even with mitigation incorporated.

IV. ENVIRONMENTAL IMPACT ANALYSIS
I. POPULATION AND HOUSING

1. INTRODUCTION

This section of the SEIR analyzes the potential environmental effects related to population and housing from implementation of the proposed project. Information in this section is based in part on data and projections from the United States Census,[1] the Department of Finance (DOF),[2] and the Southern California Association of Governments (SCAG).[3]

A. 2015 General Plan EIR Analysis and Conclusions

The 2015 General Plan EIR determined that implementation of the 2015 General Plan Update would directly result in population and employment growth in the City, however, projections for buildout of the 2015 General Plan Update would be similar to SCAG's 2035 growth forecasts for the City. Although implementation of the 2015 General Plan Update would directly induce population growth, the 2015 General Plan Update accommodates future growth by providing for infrastructure and public services to accommodate the projected growth. Furthermore, the minor population growth would be offset by employment growth, which would slightly improve the City's jobs-housing balance. As such, the 2015 General Plan EIR found that growth that would occur under implementation of the 2015 General Plan Update would not result in significant impacts.

The 2015 General Plan EIR determined that implementation of the 2015 General Plan Update would not result in the displacement of people or housing. The 2015 General Plan Update land use map does not include changes of residential land use designations to nonresidential designations and proposes designations that would result in additional housing. Furthermore, the 2015 General Plan Update and Implementation Program include policies and implementation measures that would ensure the City's existing housing stock is not negatively affected and that a broad range of housing opportunities are offered. As such, the 2015 General Plan EIR found that significant impacts related displacement would not occur.

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[1] *U.S. Census 1990, 2000, and 2010; and U.S. Census, American Community Survey, Table ID: DP03, 2019: ACS 5-Year Estimates Data Profiles for Sierra Madre.*

[2] *Department of Finance, Table E-5: Population and Housing Estimates for Cities, Counties, and the State, 2010-2021.*

[3] *Southern California Association of Governments, 2020-2045 Regional Transportation Plan / Sustainable Communities Strategy, Demographics and Growth Forecast, 2020; and Southern California Association of Governments, Local Profile Report 2019, Profile of the City of Sierra Madre, May 2019.*

2. ENVIRONMENTAL SETTING

A. Existing Conditions

The City's demographics are examined in the context of existing and projected population for the Los Angeles County region and the City of Sierra Madre. Information on population, housing, and employment for the planning area is available from several sources:

California Department of Finance. The Department of Finance (DOF) prepares and administers California's annual budget. Other duties include estimating population demographics and enrollment projections. DOF's "Table E-5: City/County Population and Housing Estimates," reports on population and housing estimates for the state, counties, and cities. Tables E-4 (Population Estimates) and E-8 (Historical Population) also provide historical population and housing estimates for cities, counties, and the State.

Southern California Association of Governments/Center for Demographic Research. Policies and programs adopted by SCAG to achieve regional objectives are expressed in its 2020 RTP/SCS. The 2020 RTP/SCS forecasts represent the likely growth scenario for the Southern California region in the future, accounting for recent and past trends, reasonable key technical assumptions, and local or regional growth policies. Growth projections are prepared for populations, households, and employment for county, regional, local jurisdictional areas, and transportation analysis zones (TAZs), which is a geographic unit for inventorying demographic data.

US Census. The official United States Census is described in Article I, Section 2 of the Constitution of the United States. It calls for an actual enumeration of the people every 10 years, to be used for apportionment among the states of seats in the House of Representatives. The United States Census Bureau publishes population and household data gathered in the decennial census. This information provides a record of historical growth rates in Los Angeles County and the City of Sierra Madre.

American Community Survey. The American Community Survey is facilitated by the U.S. Census Bureau and provides estimates of population, housing, household, economic, and transportation trends between decennial censuses.

1) *Population*

Population Trends

Table IV.I-1, Regional Population Growth Trends 1990-2020, presents population growth trends in Sierra Madre and the region from 1990 through 2020. Sierra Madre has not experienced substantial population growth for several decades as it is a largely "built-out" community. The City's population peaked about 1970 when the Census recorded 12,140 residents, after which time limited housing development, combined with an aging population and smaller household sizes, caused the population to gradually decline. Sierra Madre's 2020 population is estimated at 10,816, representing a one percent decline (approximately 100 residents) since 2010. Surrounding areas and the County as a whole has had modest population growth in the last decade.

Table IV.I-1
Regional Population Growth Trends 1990-2020

Jurisdiction	1990	2000	2010	2020	Percent Change		
					1990-2000	2000-2010	2010-2020
Arcadia	48,290	53,054	56,364	57,212	10%	6%	2%
La Canada Flintridge	19,378	20,318	20,246	20,461	5%	<1%	1%
Monrovia	35,761	36,929	36,590	37,935	2%	-1%	4%
Sierra Madre	**10,762**	**10,578**	**10,917**	**10,816**	**-2%**	**3%**	**-1%**
Los Angeles County	8,863,164	9,519,338	9,818,605	10,172,951	7%	3%	4%
Source: U.S. Census 1990, 2000 and 2010; Dept of Finance 2020 Population and Housing Estimates.							

2) *Housing*

Housing Trends

Sierra Madre is a well-established, built out community, with only a few scattered vacant parcels within the City limits. **Table IV.I-2, Regional Housing Trends**, displays housing production in Sierra Madre compared to neighboring cities and Los Angeles County. As shown in the table, During the 1990s, Sierra Madre's housing stock increased by just one percent, which was below the three percent housing growth experienced Countywide, though fairly comparable to neighboring San Gabriel Valley cities. During the 2000s, nearly 200 new units were added to Sierra Madre's housing stock, a four percent increase, and comparable to housing growth levels in Arcadia, Monrovia, and the County as a whole. Over the most recent decade, housing growth has again slowed to less than one percent, below that of the County and comparable to that in La Canada Flintridge.

The State Department of Finance documents the 2020 Sierra Madre housing stock at 5,126 units, reflecting a net increase of just 13 units since 2010. In total, Sierra Madre has experienced a net increase of 258 housing units since 1990.

Table IV.I-2
Regional Housing Trends

Jurisdiction	1990	2000	2010	2020	Percent Change		
					1990 - 2000	2000 - 2010	2010 - 2020
Arcadia	19,483	19,970	20,686	21,237	2%	4%	3%
La Canada Flintridge	6,918	6,989	7,089	7,116	1%	1%	<1%
Monrovia	13,944	13,957	14,473	15,084	<1%	4%	4%
Sierra Madre	**4,868**	**4,923**	**5,113**	**5,126**	**1%**	**4%**	**<1%**
L.A. County	3,163,343	3,270,909	3,443,087	3,590,574	3%	5%	4%
Source: U.S. Census 1990, 2000 and 2010; Dept of Finance 2020 Population and Housing Estimates.							

Existing Housing Units

Sierra Madre has traditionally been a single-family residential community. Single-family homes remain the dominant housing type, comprising 76 percent of the City's 2020 housing stock, compared to multi-family units, which comprise 24 percent. From 2000 to 2020, the number of single-family units increased by 280 units, while multi-family units decreased by 77 units. **Table IV.I-3, Housing Units by Type**, depicts the mix of housing types in Sierra Madre.

Table IV.I-3
Housing Units by Type

Unit Type	2000		2020	
	Units	Percent	Units	Percent
Single-Family (SF) Detached	3,400	69%	3,557	69%
SF Attached	205	4%	328	6%
Total Single-Family	***3,605***	**73%**	***3,885***	**76%**
2 to 4 Units	377	8%	337	7%
5 or more units	941	19%	904	18%
Total Multi-Family	***1,318***	**27%**	***1,241***	**24%**
Mobile Homes & Other	0	0%	0	0%
Total Housing Units	**4,923**	**100%**	**5,126**	**100%**
Vacancy Rate	**4.9%**		**6.9%**	
Average Household Size [1]	**2.20**		**2.29**	

1 Average household size taken from the Sierra Madre 2021-2029 Housing Element, page II-6.
Source: U.S. Census 2000; Dept of Finance 2020 Population and Housing Estimates.

The vacancy rate measures the overall housing availability in a community and is often a good indicator of how efficiently for-sale and rental housing units are meeting the current demand for housing. A low vacancy rate may indicate that households are having difficulty finding affordable housing, which can lead to overcrowding and/or overpayment. A particularly tight housing market with insufficient vacant units for normal mobility may also lead to high competition for units, placing upward pressure on rents and for-sale housing prices. A vacancy rate of five percent for rental housing and two percent for ownership housing is generally considered healthy and suggests that there is a balance between the supply and demand of housing. The 2014-2018 American Community Survey estimates rental vacancies were at five percent in Sierra Madre, indicating ideal vacancy levels for sufficient mobility. Ownership vacancies were estimated at 1.8 percent, which is close to the desired two percent reflecting a balance between supply and demand.

Housing Costs

The cost of housing is directly related to the extent of housing problems in a community. If housing costs are relatively high in comparison to household income, there will be a higher prevalence of overpayment and overcrowding. The calculation for rental housing affordability assumes that a household can expend up to 30 percent of its monthly income on housing. The calculation for ownership affordability assumes that a household can expend up to 35 percent of its monthly income on housing because of the equity and tax benefits of homeownership.

The real estate website Zillow.com has developed a home valuation model to estimate the market value of individual properties, and compiles this information to produce a median "Home Value Index" for any given geographic area. The home value index for Sierra Madre was $1,042,600 (inclusive of both single-family homes and condominiums) in December 2019, an increase of less than one percent from 2018. The

cities of San Marino and South Pasadena have experienced large positive price appreciation and that is projected to continue. Many cities in the region, including Sierra Madre, have substantially higher home values than Los Angeles County as a whole, where the median value was $679,400 in 2019 (Los Angeles/Long Beach/Anaheim metro area).

Rental information for Sierra Madre was obtained in January and February 2020 from internet rental listings on Craigslist and Westside Rentals websites. A total of 19 non-duplicative apartment units were advertised for rent in Sierra Madre. The median monthly rent for a studio was $1,472, for a one-bedroom was $1,800, for a two-bedroom unit was $2,050 and for a unit of three-bedrooms was $3,000. During the same time period, 21 homes were listed for rent. The median monthly rent for a one-bedroom house was $2,495, for a two-bedroom house was $2,995, a three-bedroom house was $4,075, and homes with four or more bedrooms commanded a median rent of $5,000.

Regional Housing Needs Assessment

The City's RHNA allocation for the 2021–2029 planning period is 204 units, which are broken down into income categories, as shown in **Table IV.I-4, City of Sierra Madre 2021-2029 Regional Housing Needs Assessment**. The main determining factors in SCAG's RHNA methodology are: household growth (based on Connect SoCal growth forecast), job accessibility, and transit accessibility. After a RHNA total is calculated, a social equity adjustment is applied to determine the four income categories.

Table IV.I-4
City of Sierra Madre 2021–2029 Regional Housing Needs Assessment

Income Category	Percentage [1]	Target (Number of Units)
Extremely Low Income	19.1%	39
Very Low Income	19.6%	40
Low Income	19.1%	39
Moderate Income	17.2%	35
Above Moderate Income	25%	51
Total	**100%**	**204**
Source: SCAG, Final 6th Cycle RHNA Allocation Plan, adopted March 4, 2021..		

3) *Employment*

Employment Trends

Employment characteristics affect housing needs by impacting one's ability to afford and acquire housing. A vast majority of Sierra Madre residents work in other parts of metropolitan Los Angeles as there are few opportunities outside of service and retail employment within the City itself. According to SCAG's Local Profile of the City of Sierra Madre for 2019, just 6.6 percent of employed Sierra Madre residents work within the City, with the remaining 93.4 percent commuting to other places.[4] Among the most prevalent commute destinations are Los Angeles (22 percent) and Pasadena (20 percent).

SCAG documents approximately 2,200 jobs within the City, with the education sector making up over 30 percent, leisure-hospitality jobs comprising 14 percent, professional jobs making up 11 percent and retail

[4] *Southern California Association of Governments, Local Profile Report 2019, Profile of the City of Sierra Madre, May 2019.*

service jobs listed at 8 percent. Total jobs declined by 37.5 percent between 2007 and 2017, though SCAG projects an estimated increase of 200 new jobs over the coming two decades.

Many of the occupations that make up Sierra Madre's workforce earn limited incomes, making it challenging to afford to live within the community. Occupations earning low and moderate incomes include key members of the Sierra Madre community, such as health care aides, preschool teachers, and retail workers. Based on 2020 Occupational Wage data for Los Angeles County, Table II-4 presents examples of occupations that fall within each income category. As presented later in the section on housing affordability, market rents in Sierra Madre are above the level of affordability to very low, low, and moderate income households**.** Homeownership costs are beyond the reach of all but upper income households, pricing much of the local workforce out of the community.

Existing Employment

Table IV.I-5, Sierra Madre Employment by Sector (2019), shows the City's workforce by occupation and industry. According to estimates calculated by the U.S. Census American Community Survey for 2019, Sierra Madre had an employed civilian labor force (16 years and older) of 5,394 persons. The largest occupational categories during that period were management, business, science, and arts occupations, and sales and office occupations, which together accounted for approximately 84.2 percent of the civilian jobs available in the City. During the 2019 period, the City's workforce comprised 0.11 percent of Los Angeles County's employed civilian workforce of 4,929,863.

Table IV.I-5
Sierra Madre Employment by Sector (2019)

Occupation/Industry	Number	Percent
By Occupation		
Management, business, science, and arts occupations	3,421	63.4%
Service occupations	414	7.7%
Sales and office occupations	1,122	20.8%
Natural resources, construction, and maintenance occupations	243	4.5%
Production, transportation, and material moving occupations	194	3.6%
Total	**5,394**	**100%**
By Industry		
Agriculture, forestry, fishing and hunting, and mining	7	0.1%
Construction	281	5.2%
Manufacturing	302	5.6%
Wholesale trade	128	2.4%
Retail trade	349	6.5%
Transportation and warehousing, and utilities	217	4.0%
Information	228	4.2%
Finance and insurance, and real estate and rental and leasing	493	9.1%
Professional, scientific, and management, and administrative and waste management services	932	17.3%
Educational services, and health care and social assistance	1,511	28.0%
Arts, entertainment, and recreation, and accommodation and food services	314	5.8%
Other services, except public administration	393	7.3%
Public administration	239	4.4%
Total	**5,394**	**100%**

Source: U.S. Census, American Community Survey, Table ID: DP03, 2019: ACS 5-Year Estimates Data Profiles for Sierra Madre.
Notes: Employment figures count civilian employees only.

4) *Planning Projections*

SCAG undertakes comprehensive regional planning with an emphasis on transportation, forecasting the likely growth scenario for the Southern California region in the future, accounting for recent and past trends, reasonable key technical assumptions, and local or regional growth policies. The 2020 RTP/SCS provides projections of population, households, and total employment for both the City of Sierra Madre and Los Angeles County from 2016 through 2045. Population forecasts for the City of Sierra Madre, Los Angeles County, and the SCAG region as a whole are listed in **Table IV.I-7, Adopted SCAG Growth Forecasts**.

Table IV.I-7
Adopted SCAG Growth Forecast (2016 to 2045)

	City of Sierra Madre		Los Angeles County		SCAG Region	
Forecast	**2016**	**2045**	**2016**	**2045**	**2016**	**2045**
Population	11,000	11,300	10,110,000	10,407,000	18,832,000	22,504,000
Households	4,800	5,000	3,319,000	3,472,000	6,012,000	7,633,000
Employment	2,200	2,400	4,743,000	4,838,000	8,389,000	10,049,000

Source: Southern California Association of Governments, 2020-2045 Regional Transportation Plan / Sustainable Communities Strategy, Demographics and Growth Forecast, 2020.

As shown in **Table IV.I-7**, based on their share of California's and the region's employment growth, migration and immigration trends, and birth rates, SCAG projects that population and housing in Sierra Madre will increase at a rate consistent with Los Angeles County, however, employment growth in Sierra Madre is forecasted to outpace employment growth within Los Angeles County. The population of the City is forecast to increase to 11,300 by 2045; an increase of 2.7 percent over SCAG's 2016 baseline of 11,000. By comparison, the population of Los Angeles County is forecasted to increase by 2.9 percent during the same period. The 2020 RTP/SCS forecasts that households in the City are projected to increase to 5,000 by 2045; an increase of 4.2 percent over SCAG's 2016 baseline of 4,800. By comparison, households in Los Angeles County are forecasted to increase by 4.6 percent during the same period. Employment in the City is forecast to increase to 2,400 by 2045; an increase of 9.1 percent over SCAG's 2016 baseline of 2,200. By comparison, employment within Los Angeles County is forecasted to increase by 2.0 percent during the same period. Both Sierra Madre and Los Angeles County are expected to experience growth at a much slower rate than the SCAG region, which is forecasted to experience a 19.5 percent increase in population, a 27 percent increase in households, and a 19.8 percent increase in employment during the same period. The greatest percentage of growth within the SCAG region is forecasted to occur in Riverside and San Bernardino Counties.

5) *Housing Element Project Sites*

The following eight sites have been identified for rezoning in the Housing Element to accommodate Sierra Madre's share of the region's housing needs. Sites 1 – 4 contain existing older residential uses and will be upzoned to allow for additional units. ites A – D are church sites that will be designated with a Religious Land Overlay to allow for the development of affordable housing on the site, while maintaining the existing church use.

Site 1

Site 1 includes nine parcels along Mariposa Avenue and Lima Street that are currently developed with single- and multi-family residential uses.

Site 2

Site 2 includes ten parcels along Suffolk Avenue and Baldwin Avenue developed with older multi-family development.

Site 3

Site 3 includes one parcel along Sierra Madre Boulevard that is currently developed with four older multi-family residential buildings, open space, and parking areas.

Site 4

Site 4 includes one parcel along N. Baldwin Avenue that is currently developed with a single-family residence.

Site A

Site A is located on the parking area of St. Rita Catholic Church. No housing or commercial uses providing employment currently exists on site A.

Site B

Site B is located in the parking area of the United Methodist Church. No housing or commercial uses providing employment currently exists on site B.

Site C

Site C is located on the parking area of the Old North Church. No housing or commercial uses providing employment currently exists on site C.

Site D

Site D is located on asphalt play areas and the parking area of the Bethany Church and School. No housing or commercial uses providing employment currently exists on site D.

B. Regulatory Setting

1) *State*

Housing Element Law: California Government Code Section 65583 and 655849(a)(1) (AB-2158)

Section 65583 of the California Government Code requires cities and counties to prepare a housing element, as one of seven state-mandated elements of the General Plan, with specific direction on its content. Pursuant to Section 65584(a)(1) the California Department of Housing and Community Development (HCD) is responsible for determining the regional housing needs assessment (segmented by income levels) for each region's planning body known as a "council of governments" (COG), the Southern California Association of Governments (SCAG) being the COG serving the Southern California area. HCD prepares an initial housing needs assessment and then coordinates with each COG in order to arrive at the final regional housing needs assessment. To date, there have been four previous housing element update "cycles." California is now in its fifth "housing-element update cycle." The SCAG Regional Housing Needs Assessment (RHNA) and the City's General Plan Housing Element are discussed further below.

The Sustainable Communities and Climate Protection Act of 2008 (SB 375, Steinberg)

Senate Bill (SB) 375 focuses on aligning transportation, housing, and other land uses to achieve regional greenhouse gas (GHG) emission reduction targets established under the California Global Warming Solutions Act, also known as Assembly Bill (AB) 32. SB 375 requires Metropolitan Planning Organizations (MPO) to develop a Sustainable Communities Strategy (SCS) as part of the Regional Transportation Plan (RTP), with the purpose of identifying policies and strategies to reduce per capita passenger vehicle-generated GHG emissions. As set forth in SB 375, the SCS must: (1) identify the general location of land uses, residential densities, and building intensities within the region; (2) identify areas within the region sufficient to house all the population of the region, including all economic segments of the population, over the course of the planning period; (3) identify areas within the region sufficient to house an eight-year projection of the regional housing need; (4) identify a transportation network to service the regional transportation needs; (5) gather and consider the best practically available scientific information regarding resource areas and farmland in the region; (6) consider the state housing goals; (7) establish the land use development pattern for the region that, when integrated with the transportation network and other transportation measures and policies, will reduce GHG emissions from automobiles and light-duty trucks to achieve GHG emission reduction targets set by the California Air Resources Board (CARB), if there is a feasible way to do so; and (8) comply with air quality requirements established under the Clean Air Act.

Existing law requires local governments to adopt a housing element as part of their general plan and update the housing element as frequently as needed and no less than every five years. Under SB 375, this time period has been lengthened to eight years and timed so that the housing element period begins no less than 18 months after adoption of the RTP, to encourage closer coordination between housing and transportation planning. SB 375 also changes the implementation schedule required in each housing element. Previous law required the housing element to contain a program that set forth a five-year schedule to implement the goals and objectives of the housing element. The new law instead requires this schedule of actions to occur during the eight-year housing element planning period, and requires that each action have a timetable for implementation. SB 375 also requires that the schedules for the regional transportation plan (RTP) and RHNA processes be synchronized and requires the RHNA to allocate housing units within the region in a manner consistent with the development pattern adopted by the SCS.

As discussed further below, on September 3, 2020, SCAG adopted its Connect SoCal: The 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (2020-2045 RTP/SCS), which is an update to the previous 2016-2040 RTP/SCS.[5] Using growth forecasts and economic trends, the RTP/SCS provides a vision for transportation throughout the region for the next 25 years that achieves the statewide reduction targets; and in so doing identifies the amount and location of growth expected to occur within the region.

Housing Crisis Act of 2019 – (SB 330, Skinner)

On October 9, 2019, the Governor signed into law the Housing Crisis Act of 2019 (SB 330). SB 330 seeks to speed up housing production in the next half decade by eliminating some of the most common entitlement impediments to the creation of new housing, including delays in the local permitting process and cities enacting new requirements after an application is complete and undergoing local review—both

[5] *Southern California Association of Governments, 2020-2045 RTP/SCS, available at: https://scag.ca.gov/connect-socal.*

of which can exacerbate the cost and uncertainty that sponsors of housing projects face. In addition to speeding up the timeline to obtain building permits, the bill prohibits local governments from reducing the number of homes that can be built through down-planning or down-zoning or the introduction of new discretionary design guidelines. The bill is in effect as of January 1, 2020, but is temporary in nature as the bill's provisions expire on January 1, 2025.

Assembly Bill 1397

California Assembly Bill 1397 (AB 1397) made a number of changes to Housing Element law by revising what could be included in a jurisdiction's inventory of land suitable for residential development. AB 1397 changed the definition of land suitable for residential development to increase the number of multifamily sites. Identified sites must be "available" and "suitable" for residential development and have a "realistic and demonstrated potential" for redevelopment during the planning period. In addition, AB 1397 requires Housing Element inventory sites to be 0.5-acre to 10 acres, have sufficient infrastructure, or to be included in a program to provide such infrastructure, to support and be accessible for housing development. Further, the jurisdiction must specify the realistic unit count for each site and whether it can accommodate housing at various income levels.

Senate Bill 166

SB 166 (2017) requires a city or county to ensure that its Housing Element inventory can accommodate its share of the regional housing need throughout the planning period. It prohibits a city or county from reducing, requiring, or permitting the reduction of the residential density to a lower residential density than what was utilized by HCD for certification of the Housing Element, unless the City or county makes written findings supported by substantial evidence that the reduction is consistent with the adopted general plan, including the Housing Element. In such cases, any remaining sites identified in the Housing Element must be adequate to accommodate the jurisdictions share of the regional housing need. A city or county may reduce the residential density for a parcel only if it identifies sufficient sites remaining within the Housing Element, as replacement sites, so that there is no net loss of residential unit capacity.

California Relocation Assistance Act

The California Relocation Assistance Act (Government Code §7260 et seq.) establishes uniform policies to provide for the fair and equitable treatment of people displaced from their homes or businesses as a direct result of state and/or local government projects or programs. The California Relocation Assistance Act requires that comparable replacement housing be made available to displaced persons within a reasonable period of time prior to the displacement. Displaced persons or businesses are assured payment for their acquired property at fair market value. Relocation assistance in the form of advisory assistance and financial benefits would be provided at the local level. This includes aid in finding a new home location, payments to help cover moving costs, and additional payments for certain other costs.

Fair Employment and Housing Act (FEHA)

The FEHA of 1959 (Government Code Section 12900 et seq.) prohibits housing discrimination on the basis of race, color, religion, sexual orientation, marital status, national origin, ancestry, familial status, disability, or source of income.

Fair Employment and Housing Act (FEHA)

The FEHA of 1959 (Government Code Section 12900 et seq.) prohibits housing discrimination on the basis of race, color, religion, sexual orientation, marital status, national origin, ancestry, familial status, disability, or source of income.

The Unruh Civil Rights Act

The Unruh Civil Rights Act of 1959 (Civ. Code Section 51) prohibits discrimination in "all business establishments of every kind whatsoever." The provision has been interpreted to include businesses and persons engaged in the sale or rental of housing accommodations.

2) *Regional*

Southern California Association of Governments

The City of Los Angeles is located within the jurisdiction of SCAG, a Joint Powers Agency established under California Government Code Section 6502 et seq. Pursuant to federal and State law, as discussed above, SCAG serves as a Council of Governments, a Regional Transportation Planning Agency, and the (Metropolitan Planning Organization (MPO) for Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial Counties. SCAG's mandated responsibilities include developing plans and policies with respect to the region's population growth, transportation programs, air quality, housing, and economic development. Specifically, SCAG is responsible for preparing the RTP/SCS and RHNA, in coordination with other State and local agencies. These documents include population, employment, and housing projections for the region and its 15 subregions. The City of Sierra Madre is located within the Los Angeles Subregion.

SCAG is tasked with providing demographic projections for use by local agencies and public service and utility agencies in determining future service demands. Projections in the SCAG RTP/SCS serve as the basis for demographic estimates in this analysis of Project consistency with growth projections. The findings regarding growth in the region are consistent with the methodologies prescribed by SCAG and reflect SCAG goals and procedures.

SCAG data is periodically updated to reflect changes in development activity and actions of local jurisdictions (e.g. zoning changes). Through these updates, public agencies have advance information regarding changes in growth that must be addressed in planning for their provision of services. Changes in the growth rates are reflected in the new projections for service and utilities planning through the long-term time horizon.

Regional Transportation Plan/Sustainable Communities Strategy

Pursuant to Government Code Section 65080(b)(2)(B), SCAG must prepare a RTP/SCS which (1) identifies the general location of uses, residential densities, and building intensities within the region; (2) identify areas within the region sufficient to house all the population of the region over the course of the planning period of the regional transportation plan taking into account net migration into the region, population growth, household formation and employment growth; (3) identify areas within the region sufficient to house an eight-year projection of the regional housing need for the region pursuant to Government Code Section 65584; (4) identify a transportation network to service the transportation needs of the region; (5) gather and consider the best practically available scientific information regarding resource areas and farmland in the region; and (6) consider the state housing goals specified in Sections 65580 and 65581, (7) set forth a forecasted development pattern for the region, which, when integrated with the transportation network, and other transportation measures and policies, will reduce the GHG emissions from automobiles and light trucks to achieve the GHG reduction targets approved by the state board, and (8) allow the RTP to comply with air quality conformity requirements under the federal Clean Air Act.

On September 3, 2020, SCAG's Regional Council adopted the Connect SoCal 2020–2045 RTP/SCS. On October 30, 2020, CARB accepted SCAG's determination that the SCS would achieve GHG emission

reduction targets. The 2020-2045 RTP/SCS meets federal and state requirements and is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. The RTP/SCS contains baseline socioeconomic projections that serve as the basis for SCAG's transportation planning. It includes projections of population, households, and employment forecasted for the years 2020, 2030, 2035, and 2045 at the regional, county, and local jurisdictional levels, and Traffic Analysis Zones (TAZ) that provide small area data for transportation modeling.[6] However, TAZ-level projections are utilized by SCAG for regional modeling purposes and are not adopted as part of Connect SoCal nor included as part of the Forecasted Regional Development Pattern.[7]

Regional Housing Needs Assessment

SCAG prepares the RHNA mandated by State law so that local jurisdictions can use this information during their periodic update of the General Plan Housing Element. The RHNA identifies the housing needs for very low income, low income, moderate income, and above moderate-income groups, and allocates these targets among the local jurisdictions that comprise SCAG. The RHNA addresses existing and future housing needs. The existing need for housing is determined using data from the most recent U.S. Census. The future need for housing is determined using data on forecasted household growth, historical growth patterns, job creation, household formation rates, and other factors. The need for new housing is distributed among income groups so that each community moves closer to the regional average income distribution. The most recent RHNA allocation, the "6th Cycle RHNA Allocation Plan," was adopted by SCAG's Regional Council on March 4, 2021 and will be in effect from 2021 to 2029.[8] Local jurisdictions are required by State law to update their General Plan Housing Elements based on the most recently adopted RHNA allocation. The City has until October 2021 to update its Housing Element to demonstrate its capacity to accommodate the allocated housing units.

3) *Local*

City of Sierra Madre 2015 General Plan

The following are relevant policies and implementation measures of the City's Housing Element and the Sierra Madre General Plan and Implementation Program, respectively.

General Plan Policies

Housing Element

- Policy 1.1: Maintain sustainable neighborhoods with quality housing, infrastructure and open space that fosters neighborhood character and the health of residents.

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[6] *Southern California Association of Governments, 2020-2045 RTP/SCS, Demographics & Growth Forecast Appendix, available at: https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocal_demographics-and-growth-forecast.pdf.*

[7] *Southern California Association of Governments, 2020-2045 RTP/SCS, Demographics & Growth Forecast Appendix, page 27, available at: https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocal_demographics-and-growth-forecast.pdf.*

[8] *Southern California Association of Governments, Regional Housing Needs Assessment, 2012, available at: https://scag.ca.gov/rhna.*

- Policy 1.2: Encourage property owners to maintain rental and ownership units in sound condition through code enforcement and housing rehabilitation programs.
- Policy 1.3: Support efforts to identify and preserve important examples of historic or architecturally significant residences.
- Policy 1.4: Support strategies for the adaptive reuse of residential, commercial, industrial and institutional structures to provide for a range of housing types.
- Policy 1.5: Conserve existing rental housing by continuing to regulate the conversion of apartments to condominium ownership.
- Policy 2.1: Encourage diversity in the type, size, price and tenure of residential development in Sierra Madre, while maintaining quality of life goals.
- Policy 2.2: Provide adequate housing sites through appropriate zoning and land use designations, consistent with Sierra Madre's regional housing growth needs.
- Policy 2.3: Support development of affordable housing by providing financial and/or regulatory incentives for projects which include low and moderate income units.
- Policy 2.4: Provide opportunities for the integration of housing in commercial districts, while maintaining the downtown's low scale character and ground level retail spaces.
- Policy 2.5: Encourage the construction of new, well designed second units in residential zones as a means of addressing a portion of Sierra Madre's regional housing needs.
- Policy 2.6: Support collaborative partnerships with non-profit organizations and affordable housing builders to provide greater access to affordable housing funds.
- Policy 2.7: Support and publicize rental assistant provided through the L.A. County Housing Authority for extremely low and very low income households.
- Policy 2.8: Encourage the provision of financial assistance to low and moderate income first-time homebuyers through County and State programs.
- Policy 3.1: Provide regulatory incentives and concessions to offset the costs of affordable housing development while protecting quality of life goals.
- Policy 3.2: Provide flexibility in development standards to accommodate new models and approaches to providing housing, such as co-housing, shared housing, and live/work housing.
- Policy 3.3: Provide fee waivers to facilitate production of affordable housing.
- Policy 3.4: Provide reduced parking standards for affordable and special needs housing.
- Policy 3.5: Provide zoning to accommodate transitional housing, supportive housing, emergency shelters, and community care facilities to help address the housing needs of Sierra Madre's special needs populations

Land Use Element

- Policy L1.1: Maintain areas of the City for single-family residences on varying lot sizes through the review and update of appropriate development standards.

- Policy L1.2: Maintain areas of the City for the development of two units per lot through the review and update of appropriate development standards.
- Policy L1.3: Maintain areas of the City for the development of multiple-unit apartment, condominium, and townhouse development through the review and update of appropriate development standards.
- Policy L1.4: Develop regulations for housing which meets the special needs of senior citizens and the disabled.
- Policy L1.5: Encourage preservation, refurbishment, and adaptive reuse of existing housing stock.
- Policy L2.3: Establish zoning provisions for group living facilities including floor area limits, height limits, setbacks, location of residential uses in commercial areas, and design guidelines.
- Policy L19.1: Allow for one or two units per lot.
- Policy L23.1: Allow for densities of approximately 13 units per acre.
- Policy L35.4: Allow for residential uses at the rear and above the first floor on commercial properties.
- Policy L37.6: Accommodate live/work space for artists to have studios in concert with residential units.
- Policy L37.7: Accommodate housing units (i) on the second level, or to the rear of buildings provided that the impacts of noise, odor, and other adverse characteristics of commercial activity can be adequately mitigated, and a healthy, safe, and well-designed environment is achieved for the residential units, and (ii) in the easterly third of the Artisan Mixed-Use area.

Implementation Program Measures

Land Use Implementation Program

- Measure IM-1: The City shall continue to enforce the R-1, H, R-C, R-2 and R-3 Zoning Ordinances and amend them as necessary to maintain single-family, two-family and multiple family residential areas in the City.
- Measure IM-2: The City shall amend the Zoning Code as necessary to include a program to encourage preservation of existing housing stock and discourage lot splits.
- Measure IM-24: The City shall advertise the availability of the Los Angeles County Housing Rehabilitation Loan Program on the City's website, and disseminate flyers in public locations.
- Measure IM-23: The City shall develop a program to include economic assistance, to the extent feasible, to discourage the deterioration of existing housing stock in the Residential Canyon (R-C) Zone.
- Measure IM-20: The City shall continue to allow the existing multifamily residential and retail uses at the junction of Woodland Drive and Brookside Lane.

3. ENVIRONMENTAL IMPACTS AND MITIGATIONS

A. Threshold of Significance

Appendix G of the CEQA Guidelines provides thresholds address impacts related to population and housing. Specifically, the Guidelines state that the proposed project may have an adverse significant population and housing impact if it would:

a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure); or

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

B. Project Impacts and Mitigation Measures

Impact I-1: Would the project Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Impact Analysis:

The 2015 General Plan EIR determined that implementation of the 2015 General Plan Update would directly result in population and employment growth in the City, however, projections for buildout of the 2015 General Plan Update would be similar to SCAG's 2035 growth forecasts for the City. Although implementation of the 2015 General Plan Update would directly induce population growth, the 2015 General Plan Update accommodates future growth by providing for infrastructure and public services to accommodate the projected growth. Furthermore, the minor population growth would be offset by employment growth, which would slightly improve the City's jobs-housing balance. As such, the 2015 General Plan EIR found that growth that would occur under implementation of the 2015 General Plan Update would not result in significant impacts.

The project proposes land use designation changes, rezoning, and updates to the General Plan Land Use, Safety, and Circulation Elements. The update to the Land Use Element includes establishing two new multi-family residential land use categories (R-3-20 and R-3-30), creating an Affordable Housing Overlay on select congregational sites, along with minor changes to the Land Use table and map to accommodate residential land uses on the sites identified to meet the RHNA allocation. The update to the Safety Element includes policies related to limiting risk from wildfire, including avoiding development in Very High Fire Hazard Severity Zones (VHFHSZ) updating maps related to fire hazards, and developing a Vegetation Management Program. The update to the Circulation Element includes minor updates to the existing setting and a policy update related to the City's adoption of VMT thresholds.

Changes in land use designations, rezoning, and updates to the Land Use Element would result in an increase in residential units and an associated increase in residential population within the City. No changes or updates would allow for an increase in non-residential uses and, accordingly, no increase in employment would occur within the City. As shown in **Table II-6, Proposed Housing Element General Plan Amendment and Rezone Sites**, in **Section II, Project Description**, of this Draft SEIR, implementation of the project could result in the buildout of approximately 211 dwelling units. When added to the existing housing stock of 5,126 units (see **Table IV.I-3, Housing Units by Type**), implementation of the project would result in a total of 5,337 dwelling units, an approximate 4.1 percent increase. The addition of 211

units to the City's housing stock would result in a population increase of approximately 483 persons.[9] When added to the existing population of 10,816 persons (see **Table IV.I-1, Regional Population Growth Trends 1990-2020**), implementation of the project would result in a total of 11,299 persons, an approximate 4.5 percent increase.

Table IV.I-8
Project Comparison to SCAG Growth Forecast

	Housing		Population	
Forecast	**Increase**	**Total**	**Increase**	**Total**
SCAG Forecast[1]	200	5,000	300	11,300
Project	211	5,337	483	11,299
Exceedance	5.5%	6.7%	61%	0%

[1] SCAG planning period is from 2020-45.
Source: Southern California Association of Governments, 2020-2045 Regional Transportation Plan / Sustainable Communities Strategy, Demographics and Growth Forecast, 2020.

The Housing Element planning period is from 2021-2029. As shown in **Table IV.I-8**, SCAG projects that the City will add 200 dwelling units during their 2020-2045planning period for a total of 5,000 dwelling units. Accordingly, development that would be supported by the project could exceed both the number of new units and the total number of units projected for the City by SCAG. As also shown, SCAG projects that the City will add 300 persons during the planning period for a total population of 11,300 persons. Accordingly, development that would be supported by the project could be within the total population projected for the City by SCAG, however, it could exceed the projected increase of persons. It should be noted that this discrepancy is due to SCAG's baseline population estimate for 2016 exceeding DOF's population estimate for 2020, which is used as the existing baseline condition in this analysis. Although the increase in housing that would be supported by the project would exceed what is projected for the City, as shown in **Table IV.I-8**, these exceedances would not be substantial (5.5 percent over the projected number of additional units and 6.7 percent over the projected total number of units). In addition, although the increase in population that could occur under the project could exceed the projected increase, the resulting total population would be within the projections for the City. Therefore, the increases in population and housing that could occur as a result of the project would not be considered substantial and by the very nature of a General Plan Housing Element, would not be considered unplanned.

Furthermore, the project does not propose any development. Future housing development facilitated by the project would be subject to discretionary permits and would occur as market conditions allow and at the discretion of the individual property owners. Therefore, the project would not directly induce population growth in the City. The project would identify a series of implementing actions to increase the City's housing capacity. However, any future housing development facilitated by the project would occur in urbanized locations near existing infrastructure (roads, utilities) and served by fire and other emergency responders. Given these conditions and the City's existing development and housing occupancy patterns, it is not anticipated future housing development facilitated by the project would indirectly induce population growth through extension of roads or other infrastructure.

[9] *Estimated population increase was based on an average household size for Sierra Madre of 2.29 persons per household as noted above in **Table V.I-3, Housing Units by Type**.*

Updates to the Safety Element would serve to reduce the City's risks from wildfire and would not have the potential to impact population, housing, or employment within the City.

Updates to the Circulation Element are primarily ministerial and pertain to the City's approach for analyzing transportation-related environmental impacts and would not have the potential to impact population, housing, or employment within the City.

Based on the above, no new significant impacts related to population, housing, or employment would occur as a result of the project and, as with the 2015 General Plan EIR, impacts would be less than significant.

Mitigation Measures:

None required.

Impact I-2: Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Impact Analysis:

The 2015 General Plan EIR determined that implementation of the 2015 General Plan Update would not result in the displacement of people or housing. The 2015 General Plan Update land use map does not include changes of residential land use designations to nonresidential designations and proposes designations that would result in additional housing. Furthermore, the 2015 General Plan Update and Implementation Program include policies and implementation measures that would ensure the City's existing housing stock is not negatively affected and that a broad range of housing opportunities are offered. As such, the 2015 General Plan EIR found that significant impacts related displacement would not occur.

The project proposes land use designation changes, rezoning, and updates to the General Plan Land Use, Safety, and Circulation Elements. The update to the Land Use Element includes establishing two new multi-family residential land use categories (R-3-20 and R-3-30), creating an Affordable Housing Overlay on select congregational sites, along with minor changes to the Land Use table and map to accommodate residential land uses on the sites identified to meet the RHNA allocation. The update to the Safety Element includes policies related to limiting risk from wildfire, including avoiding development in Very High Fire Hazard Severity Zones (VHFHSZ) updating maps related to fire hazards, and developing a Vegetation Management Program. The update to the Circulation Element includes minor updates to the existing setting and a policy update related to the City's adoption of VMT thresholds.

Changes in land use designations, rezoning, and updates to the Land Use Element would result in an increase in residential units and an associated increase in residential population within the City that could potentially displace existing people or housing on these sites. Sites A-D currently developed with parking lots and redevelopment at these sites would not displace people or housing. However, sites 1-4 are currently developed with single- and multi-family residences that could be displaced should development occur at these locations in the future.

The City is a small suburban community within the greater Los Angeles metropolitan area. As a foothill community with high land values and limited land resources, the City has developed into a mostly built-out community with little available developable land. This trend is seen in many of the surrounding San Gabriel Valley cities like Pasadena, Altadena, Arcadia, and Monrovia. The City's comparatively smaller size

in terms of physical land further constrains the ability to rely solely on undeveloped parcels to meet their RHNA need. Therefore, future housing development facilitated by the project on developed parcels could displace people or housing, necessitating the construction of replacement housing elsewhere. However, the California Relocation Assistance Act would assist any residents who would be displaced including assistance finding housing, moving cost assistance, and additional payments for certain other costs incurred which would minimize potential impacts from displacement. In addition, the project does not propose any development. Future housing development facilitated by the project would be subject to discretionary permits and would occur as market conditions allow and at the discretion of the individual property owners.

City compliance with SB 166 would also help to minimize the potential for future housing displacement. SB 166 prohibits a city or county from reducing, requiring, or permitting the reduction of the residential density to a lower residential density below what was utilized by the HCD in determining compliance with the Housing Element law, unless the City or county makes written findings supported by substantial evidence that the reduction is consistent with the adopted general plan, including the Housing Element. No proposed changes to land use designation or zoning would change residential designations or zones to non-residential. All land use designation changers and rezoning proposed by the project would allow for an increase in residential density on the identified potential development sites, and all updates to the Land Use Element would occur such that there is no net loss of residential unit capacity. Furthermore, the Land Use Element contains policies and implementation measures which would ensure that the City's existing housing stock is not negatively impacted. ADUS could be developed on as-yet unidentified sites. However, since ADUs are by nature accessory and additional DUs, which do not displace existing DUs, ADU construction would not displace existing housing or people.

Updates to the Safety Element would serve to reduce the City's risks from wildfire and would not have the potential to displace people or housing within the City.

Updates to the Circulation Element are primarily ministerial and pertain to the City's approach for analyzing transportation-related environmental impacts and would not have the potential to displace people or housing within the City.

Based on the above, no new significant impacts related to the displacement of people or housing would occur as a result of the project and, as with the 2015 General Plan EIR, impacts would be less than significant.

Mitigation Measures:

None required.

4. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Similar to the findings of the 2015 General Plan EIR, all impacts would be less-than significant. No mitigation measures are necessary.

IV. ENVIRONMENTAL IMPACT ANALYSIS
J.1 PUBLIC SERVICES – FIRE PROTECTION

1. INTRODUCTION

This section of the SEIR analyzes the potential environmental effects related to fire protection and emergency services from implementation of the proposed project. Information in this section is based in part on communications with the Sierra Madre Fire Department (SMFD) and their 2020 Annual Report.[1]

A. 2015 General Plan EIR Analysis and Conclusions

The 2015 General Plan EIR determined that although future development in accordance with the 2015 General Plan Update would introduce new structures, residents, and workers into the SMFD service boundaries, thereby increasing the requirement for fire protection facilities and personnel, the 2015 General Plan Update would not cause a substantial change to SMFD's current level of service and SMFD's current equipment needs, equipment replacement schedule, and staffing levels are sufficient to provide adequate levels of service to the City. As such, the 2015 General Plan EIR found that impacts to fire and emergency services would not be significant.

2. ENVIRONMENTAL SETTING

A. Existing Conditions

The SMFD provides fire protection and emergency medical services (EMS) to a primarily residential area of 3.2 square miles with a wildland/urban interface of more than 11,000 residents. The City's fire station is centrally located in the downtown area of the City at 242 W. Sierra Madre Boulevard. SMFD participates in a California Mutual Aid Program by providing its resources to the State of California Office of Emergency Services (OES) for combating natural and man-made disasters. Additionally, SMFD has a mutual aid agreement with the US Forest Service, Los Angeles County Fire Department, and the ten other Area C departments, which include the cities of Sierra Madre, Burbank, Pasadena, Glendale, Arcadia, Monrovia, San Gabriel, South Pasadena, Alhambra, and San Marino. Alarm call types are defined as follows:

First Alarm: Requires aid in the form of 1 truck, 2 engines, 1 rescue ambulance, and a Battalion Chief.

Second and Third Alarms: Requires aid in the form of an additional truck, 3 engines, and a Battalion Chief.

1) *Staffing and Equipment*

SMFD is comprised of 17 full-time personnel: 1 fire chief; 1 administrative aide; 3 fire captains; 3 engineers; and 9 firefighter paramedics.[2] Battalion Chief coverage, for larger incidents, is provided by a contract agreement for incident management by the City of Arcadia. Currently, SMFD is staffed with 4

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[1] *Sierra Madre Fire Department, 2020 Annual Report, available at: https://www.cityofsierramadre.com/UserFiles/Servers/Server_212309/File/Departments/Fire%20Department/Annual%20Report/2020%20SMFD%20ANNUAL%20REPORT.pdf, accessed June 28, 2021.*

[2] *Sierra Madre Fire Department, 2020 Annual Report, page 11.*

emergency medical technicians and 11 State of California licenses/Los Angeles accredited paramedics with a range of experience in all aspects of emergency medicine.[3]

SMFD is equipped with 3 Type 1 engines; 1 water tender (3,000 gallons); 2 rescue ambulances; 1 chief's vehicle; 1 command vehicle; and 1 utility truck.

2) *Performance Standards and Statistics*

SMFD adheres to the National Fire Protection Association 1710 (NFPA 1710) standard response time goal of 5:00 minute. SMFD's average response times in 2015 (the last year such metrics were reported in the department's annual reports) were 4:56 minutes for fire calls and 4:05 for EMS calls.[4]

In 2020 SMFD ran 1,150 calls: 64 percent (736 calls) for EMS; 3 percent fire; 11 percent service/public assistance; 9 percent good intent call; 8 percent hazardous conditions; and 5 percent false alarm/false call.

3) *Funding*

Funding for SMFD primarily comes from the City's General Fund and is supplemented by revenue from EMS billing. SMFD's General Fund budget is divided between fire suppression, emergency medical services, the purchase of safety equipment and supplies, equipment maintenance, uniforms, and training. Additional costs include allocations for vehicle payments, vehicle maintenance, fuel, and facility maintenance. Personnel costs account for approximately 85 percent of the budget, while fire suppression accounts for 10 percent, and EMS costs account for 5 percent. According to the City's Annual Budget Report for 2020-2021, proposed General Fund allocations for the 2020-2021 fiscal year for SMFD include $1,965,143 for personnel and $341,900 for maintenance and operations.

SMFD received a total of $468,735.18 in revenue during the 2019-2020 fiscal year primarily from EMS/paramedic billing (88 percent) with additional revenue received from the EMS Subscription Program and OES reimbursements. In 2020, SMFD received $402,209.70 from ambulance transports. Additionally, SMFD was deployed on four strike teams, earning approximately $136,000 in revenue, which will be reflected in the 2020-2021 fiscal year revenue.

Another source of funding is through the collection of Public Facilities Fees, in accordance with Chapter 15.52 (Public Facilities Fee) of the City's Municipal Code. Pursuant to Chapter 15.52, all new development must pay a Public Facilities Fee to offset the proposed development's potential impact on public facilities demand.[5] Public facilities include services such as water, sewer, parks, police, fire, and library services. Fees are collected at the time of issuance of building permits, as outlined in Section 15.52.050 (Timing of Payment).

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[3] *Sierra Madre Fire Department, 2020 Annual Report, page 12.*

[4] *Sierra Madre Fire Department, 2015 Annual Report, page 6.*

[5] *For purposes of assessing Public Facilities Fees, new development does not include that which replaces existing development, but applies only to additional residential units or non-residential square footage created by new development.*

4) *Housing Element Project Sites*

Site 1

Site 1 includes nine parcels along Mariposa Avenue and Lima Street that are currently developed with single- and multi-family residential uses. Site 1 is located directly southwest of SMFD, with the eastern portion of the site immediately adjacent to the rear of the station.

Site 2

Site 2 includes ten parcels along Suffolk Avenue and Baldwin Avenue developed with older multi-family development. Site 2 is located approximately 0.4-mile southeast of SMFD.

Site 3

Site 3 includes one parcel along Sierra Madre Boulevard that is currently developed with four older multi-family residential buildings, open space, and parking areas. Site 3 is located approximately 0.25-mile west of SMFD.

Site 4

Site 4 includes one parcel along N. Baldwin Avenue that is currently developed with a single-family residence. Site 4 is located approximately 0.4-mile northeast of SMFD.

Site A

Site A is located on the parking area of St. Rita Catholic Church. Site A is located approximately 0.5-mile northeast of SMFD.

Site B

Site B is located in the parking area of the United Methodist Church. Site B is located approximately 0.5-mile west of SMFD.

Site C

Site C is located on the parking area of the Old North Church. Site C is located approximately 0.1-mile northeast of SMFD.

Site D

Site D is located on asphalt play areas and the parking area of the Bethany Church and School. Site D is located approximately 0.3-mile northeast of SMFD.

B. Regulatory Setting

1) *State*

California Building Code and California Fire Code

The California Building Code (California Code of Regulations, Title 24, Part 2) is a compilation of building standards, including fire safety standards for new buildings, which are also provided in the California Fire Code (California Code of Regulations, Title 24, Part 9). California Building Code standards are based on building standards that have been adopted by state agencies without change from a national model code; building standards based on a national model code that have been changed to address particular California conditions; and building standards authorized by the California legislature but not covered by the national model code. The 2019 edition of the California Building Code became effective on January 1, 2020.[6] The building standards in the California Building Code apply to all locations in California, except where more stringent standards have been adopted by state agencies and local governing bodies. Typical fire safety requirements of the California Fire Code include: the installation of fire sprinklers in all high-rise buildings; the establishment of fire resistance standards for fire doors, building materials, and particular types of construction; and the clearance of debris and vegetation within a prescribed distance from occupied structures within wildfire hazard areas. Specific California Fire Code fire safety regulations have been incorporated by reference in the LAMC with local amendments, as discussed below.[7]

California Fire Service and Rescue Emergency Aid System

The LAFD participates in the California Fire Service and Rescue Emergency Mutual Aid System, through which the California's Governor's Office of Emergency Services (OES), Fire and Rescue Division is responsible for the development, implementation and coordination of the California Fire Service and Rescue Emergency Mutual Aid Plan (Mutual Aid Plan).[8] The Mutual Aid Plan outlines procedures for establishing mutual aid agreements at the local, operational, regional, and state levels, and divides the state into six mutual aid regions to facilitate the coordination of mutual aid. The LAFD is located in Region I. Through the Emergency Mutual Aid system, the OES is informed of conditions in each geographic and organizational area of the state, and the occurrence or imminent threat of disaster. All OES Mutual Aid participants monitor a dedicated radio frequency for fire events that are beyond the capabilities of the responding fire department and provide aid in accordance with the management direction of the OES.[9]

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[6] *California Building Code, (California Code of Regulations, Title 24, Part 2).*

[7] *Los Angeles Fire Department, Mutual Aid Agreements/Disaster Declarations/Potential Fiscal Impacts, July 3, 2014, https://www.lafd.org/sites/default/files/pdf_files/lafdlafdreport186489186_07312014.pdf. Accessed January 15, 2021.*

[8] *California Emergency Management Agency, Mutual Aid Plan, https://www.caloes.ca.gov/PlanningPreparednessSite/Documents/CAMasterMutualAid.pdf. Accessed May 12, 2021.*

[9] *California Emergency Management Agency, Mutual Aid Plan, https://www.caloes.ca.gov/PlanningPreparednessSite/Documents/CAMasterMutualAid.pdf. Accessed May 12, 2021.*

California Vehicle Code

Section 21806 of the California Vehicle Code (CVC) pertains to emergency vehicles responding to Code 3 incidents/calls. This section of the (CVC) states the following:

> *Upon the immediate approach of an authorized emergency vehicle which is sounding a siren and which has at least one lighted lamp exhibiting red light that is visible, under normal atmospheric conditions, from a distance of 1,000 feet to the front of the vehicle, the surrounding traffic shall, except as otherwise directed by a traffic officer, do the following: (a) (1) Except as required under paragraph (2), the driver of every other vehicle shall yield the right-of-way and shall immediately drive to the right-hand edge or curb of the highway, clear of any intersection, and thereupon shall stop and remain stopped until the authorized emergency vehicle has passed. (2) A person driving a vehicle in an exclusive or preferential use lane shall exit that lane immediately upon determining that the exit can be accomplished with reasonable safety. (b) The operator of every street car shall immediately stop the street car, clear of any intersection, and remain stopped until the authorized emergency vehicle has passed. (c) All pedestrians upon the highway shall proceed to the nearest curb or place of safety and remain there until the authorized emergency vehicle has passed.*

California Constitution Article XIII, Section 35

Section 35 of Article XIII of the California Constitution at subdivision (a)(2) provides: "The protection of public safety is the first responsibility of local government and local officials have an obligation to give priority to the provision of adequate public safety services." Section 35 of Article XIII of the California Constitution was adopted by the voters in 1993 under Proposition 172. Proposition 172 directed the proceeds of a 0.50-percent sales tax to be expended exclusively on local public safety services. California Government Code Sections 30051-30056 provide rules to implement Proposition 172. Public safety services include fire protection. Section 30056 mandates that cities are not allowed to spend less of their own financial resources on their combined public safety services in any given year compared to the 1992-93 fiscal year. Therefore, an agency is required to use Proposition 172 to supplement its local funds used on fire protection services, as well as other public safety services. In *City of Hayward v. Board of Trustee of California State University* (2015) 242 Cal. App. 4th 833, the court found that Section 35 that, cities have "a constitutional obligation to provide adequate fire protection services".

California Governor's Office of Emergency Services (Cal OES)

In 2009, the State of California passed legislation creating the Cal OES and authorized it to prepare a Standard Emergency Management System (SEMS) program (Gov. Code Section 8607; Title 19 CCR Section 2401 et seq.), which sets forth measures by which a jurisdiction should handle emergency disasters. In California, SEMS provides the mechanism by which local government requests assistance. Non-compliance with SEMS could result in the state withholding disaster relief from the non-complying jurisdiction in the event of an emergency disaster. Cal OES coordinates the state's preparation for, prevention of, and response to major disasters, such as fires, floods, earthquakes, and terrorist attacks. During an emergency, Cal OES serves as the lead state agency for emergency management in the state. It also serves as the lead agency for mobilizing the state's resources and obtaining federal resources. Cal OES coordinates the state response to major emergencies in support of local government. The primary responsibility for emergency management resides with local government. Local jurisdictions first use their own resources and, as they are exhausted, obtain more from neighboring cities and special districts, the county in which they are located, and other counties throughout the state through the statewide mutual

aid system (see discussion of Mutual Aid Agreements, below). California Emergency Management Agency (Cal-EMA) maintains oversight of the state's mutual aid system

2) *Local*

City of Sierra Madre Municipal Code

The following provisions from the City's Municipal Code focus on fire and emergency services impacts associated with new development projects and are relevant to the General Plan Update:

- **Title 8 (Health and Safety), Chapter 8.28 (Protected Fire Area).** Designates protected fire areas within the City as determined by the Sierra Madre Fire Department and City Council with approval through a public hearing. Regulations in these protected areas include topics such as smoking, outdoor fires, open flame devices, disposal of ashes, use of motor vehicles, etc.
- **Title 8 (Health and Safety), Chapter 8.36 (Hazardous Brush Clearance).** Ensures that all landowners remove hazardous refuse or weeds, trees, and other vegetations, which, by reason of proximity to a building or structure, constitutes a fire hazard. In cases where property is undeveloped or larger than five acres, a vegetation management plan shall be required.
- **Title 15 (Buildings and Construction), Chapter 15.24 (Fire Code).** Adopts the most current (2013) California Fire Code, which includes precautionary regulations and standards such as fire-retardant roofs, automatic life safety support sprinkler system, fire extinguishers, etc.
- **Title 15 (Buildings and Construction), Chapter 15.28 (Fire Zones).** Section 15.28.020 of this chapter designates approximately the entire northern half of the City are to be a "Very High Fire Hazard Severity Zone", as determined by the California Department of Forestry and Fire Protection. Therefore, development in this zone requires compliance with California Green Building Standards Codes and various fire-resistive design standards.
- **Title 15 (Buildings and Construction), Chapter 15.52 (Public Facilities Fee).** Imposes a fee as a condition of issuance of any project permit to mitigate potential impacts of new developments on public facilities.

City of Sierra Madre 2035 General Plan

The following are relevant policies and implementation measures of the Sierra Madre General Plan Update and Implementation Program.

General Plan Update Policies

Hazard Prevention Element

- Policy Hz1.1: Maintain a combination volunteer and paid fighting force.
- Policy Hz1.2: Promote public education about fire safety at home, in the community, and in the work place.
- Policy Hz1.3: Continue to coordinate the provision of fire services with all public safety service providers and monitor their adequacy and responsiveness to community needs.

- Policy Hz1.4: Encourage, facilitate, and participate in, where appropriate, the establishment of methods of communication between the Fire Department and Sierra Madre community members to discuss and resolve issues of responsiveness and sensitivity.
- Policy Hz2.1: Continue to require all existing and new development to install and maintain adequate smoke detection systems.
- Policy Hz2.2: Continue to require all new development to install automatic fire sprinkler systems.
- Policy Hz2.3: Continue to require review of building plans by a Fire Captain/Fire Marshal.
- Policy Hz2.4: Consider water availability in terms of quantity and water pressure for safety purposes when considering the size and location of new residential construction.
- Policy Hz2.5: Assess the impacts of incremental increases in development density and related traffic congestion on fire hazards and emergency response time, and ensure through the development review process that new development will not result in a reduction of fire protection services below acceptable levels.
- Policy Hz2.6: Continue to require that new development provide adequate hydrants and show sufficient evidence that there is adequate water supply/fire flow and that it is available to accommodate the fire protection needs of new construction.
- Policy Hz2.7: Protect the wild land/urban interface by considering fire hazards when evaluating projects in the canyon areas.
- Policy Hz2.8: Develop vegetation management plans that manage chemise and chaparral to ensure adequate firebreaks, to provide adequate access for fire protection water systems, and access for firefighting.
- Policy Hz2.9: Maintain and update hillside development standards which include fire prevention design measures.
- Policy Hz2.10: Work with Public Works, the Police Department and residents to develop a solution to parking issues that affect Fire Department access in the canyon areas.
- Policy Hz2.11: Enhance emergency services to increase the efficiency of wildfire response and recovery activities through purchase of a Type 5 Vehicle.
- Policy Hz3.1: Continue to cooperate with Area C Fire Departments for second and third alarm calls and continue with the State-wide Mutual Aid Agreements.
- Policy Hz3.2: Work with Public Works staff of adjacent jurisdictions to ensure that roadways are adequate for fire equipment.
- Policy Hz4.1: Update the Emergency Operations Plan annually.
- Policy Hz4.2: Maintain a fully operational Emergency Operations Center.
- Policy Hz4.3: Enlist participation from the community and City staff for emergency operations.
- Policy Hz4.4: Provide emergency operations training and conduct test runs.

- Policy Hz 4.5: Review and upgrade emergency operations equipment such as 911 equipment, and the police dispatch system as needed to maintain modern levels of service.
- Policy Hz4.6: Develop and utilize emergency public communication systems.
- Policy Hz4.7: Regularly review City evacuation routes for capacity, safety, and viability under a range of emergency scenarios.
- Policy Hz5.1: Mandate annual brush removal from April to June.
- Policy Hz5.2: Work with community groups in presenting information and trainings regarding wildfire prevention and awareness.
- Policy Hz5.3: Promote voluntary efforts in tree trimming, and brush and weed abatement.
- Policy Hz5.4: Identify funds by way of a tree assessment district or "environment fund" or other source of funds to pay for vegetation trimming and removal of dead wood on public property and private properties where vegetation is creating a canopy over public rights-of-way.
- Policy Hz5.5: Develop a Vegetation Management Program.
- Policy Hz5.a.1 and Policy Hz5.b.1: Enhance outreach and education programs (e.g. CAL FIRE, Vegetation Management) aimed at mitigating wildfire hazards.
- Policy Hz5.a.2 and Policy Hz5.b.2: Maintain contemporary collection of maps relating to the fire hazard to help educate and assist builders and homeowners in mitigating against wildfire

<u>Implementation Program Measures</u>

Fire Safety Implementation Program

- Measure IM-1: The City shall continue to provide cost efficient fire and EMS services by maintaining adequate funding and recruiting and retaining qualified personnel.
- Measure IM-2: The City shall provide educational opportunities for the public to learn about fire safety by hosting annual preparedness fairs, fire prevention festivals, brush awareness evenings, and conducting annual inspections and prevention programs at local schools.
- Measure IM-3: The City shall distribute a semiannual newsletter from the Fire Department through social media websites, addressing Fire Prevention issues directly with the community.
- Measure IM-4: The City shall continue to contract dispatch services to Verdugo Dispatch Center and monitor response times through the Verdugo CAD (Computer Aided Dispatch) system.
- Measure IM-5: The City shall continue to require adequate fire protection through the adoption of the State Fire Code with local amendments for all developments.
- Measure IM-6: The City shall oversee the maintenance of adequate brush clearance in the Wildland/Urban Interface within the High Severity Fire Zone through annual brush inspections.
- Measure IM-7: The City shall continue to improve response times for Safety Personnel and their equipment in the Canyon areas.

- Measure IM-8: The City shall provide a fully functioning Emergency Operating Center with annual updates for City disasters.
- Measure IM-9: The City shall collaborate with the Arcadia Fire Department and Los Angeles County Road Department and Fire Department in the application of fire retardant and brush clearance along roadways

3. ENVIRONMENTAL IMPACTS AND MITIGATIONS

A. Threshold of Significance

Appendix G of the CEQA Guidelines provides thresholds address impacts related to fire protection services. Specifically, the Guidelines state that the proposed project may have an adverse significant fire protection services impact if it would:

a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objective for fire protection.

B. Project Impacts and Mitigation Measures

Impact J-1: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objective for fire protection?

Impact Analysis:

The 2015 General Plan EIR determined that although future development in accordance with the 2015 General Plan Update would introduce new structures, residents, and workers into the SMFD service boundaries, thereby increasing the requirement for fire protection facilities and personnel, the 2015 General Plan Update would not cause a substantial change to SMFD's current level of service since the City's boundaries would remain the same and population growth would not be substantial. Additionally, SMFD's current equipment needs, equipment replacement schedule, and staffing levels are sufficient to provide adequate levels of service to the City. Furthermore, the 2015 General Plan Update and Implementation Program include policies and implementation measures that would help reduce impacts of potential development on fire and emergency services. Individual development projects within the City would also be reviewed by the City and SMFD and would be required to comply with the requirements in effect at the time building permits are issued, and if increased demand for additional personnel, facilities, and operational costs do emerge due to buildout of the 2015 General Plan Update, the costs would be funded and offset through the increased tax revenue generated and deposited into the City's General Fund (in which SMFD receives annual funding) from the additional development. As such, the 2015 General Plan EIR found that impacts to fire and emergency services would not be significant.

The project proposes land use designation changes, rezoning, and updates to the General Plan Land Use, Safety, and Circulation Elements. The update to the Land Use Element includes establishing two new multi-family residential land use categories (R-3-20 and R-3-30), creating an Affordable Housing Overlay on select congregational sites, along with minor changes to the Land Use table and map to accommodate

residential land uses on the sites identified to meet the RHNA allocation. The update to the Safety Element includes policies related to limiting risk from wildfire, including avoiding development in Very High Fire Hazard Severity Zones (VHFHSZ) updating maps related to fire hazards, and developing a Vegetation Management Program. The update to the Circulation Element includes minor updates to the existing setting and a policy update related to the City's adoption of VMT thresholds.

Changes in land use designations, rezoning, and updates to the Land Use Element would allow for an increase in residential service population for SMFD. However, as detailed in **Section V.I, Population and Housing**, of this Draft SEIR, additional growth that would be supported by the project would not be substantial. Specifically, a maximum increase of 211 residential units and 483 residents could occur within the City. In addition, as with the 2015 General Plan Update, the project would not alter SMFD's service boundaries and individual development projects would be required to perform project-level evaluation of potential impacts to fire protection and emergency services on a case-by-case basis. Furthermore, the General Plan, including the Land Use Element, contains both existing and newly proposed policies and implementation measures designed to reduce potential impacts related to fire protection services. Through the City's regular budgeting efforts, SMFD's resource needs, including staffing, equipment, trucks and engines, ambulances, other special apparatuses, and possibly station expansions would be identified and allocated according to the priorities at the time. SMFD's current equipment needs, equipment replacement schedule, and staffing levels are sufficient to provide adequate levels of service to the City and should additional cost arise from potential future development supported by the project, costs would continue to be offset through additional tax revenue generated by the individual developments through the City's General Fund. Lastly, the increases in traffic from the additional development that could occur under the project would not greatly affect emergency vehicles because, pursuant to California Vehicle Code Section 21806, emergency vehicles have priority on streets and options to avoid traffic such as the use of sirens and ability to drive in opposing traffic lanes.[10]

Updates to the Safety Element would serve to reduce the City's risks from wildfire, which would, in turn, reduce the demand on SMFD. With the exception of Site A, none of the identified potential development sites are located within the VHFHSZ. In addition, although Site A is located within the VHFHSZ, Site A is completely paved and no wildlands or other fire hazard areas are located on or adjacent to the site. Furthermore, the General Plan, including the Safety Element, contains both existing and newly proposed policies and implementation measures designed to reduce potential risks from fire hazards, including wildfires.

Updates to the Circulation Element are primarily ministerial and pertain to the City's approach for analyzing transportation-related environmental impacts. No changes to roadway classifications or emergency evacuation routes are proposed or would occur as a result of the project.

Based on the above, no new significant impacts to fire protection and emergency services would occur as a result of the project and, as with the 2015 General Plan Update, impacts would be less than significant.

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[10] *California Vehicle Code, Section 21806, available at: https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=VEH&sectionNum=21806, accessed June 29, 2021.*

Mitigation Measures:

None required.

4. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Similar to the findings of the 2015 General Plan EIR, all impacts will be reduced to less-than significant levels. No mitigation measures are necessary.

5. INTRODUCTION

This section of the SEIR analyzes the potential environmental effects related to police protection services from implementation of the proposed project. Information in this section is based in part on the Sierra Madre Police Department (SMPD)'s 2018 Annual Report.[11]

A. 2015 General Plan EIR Analysis and Conclusions

The General Plan EIR determined that although future development in accordance with the 2015 General Plan Update would introduce new residents and workers into the Sierra Madre Police Department service boundaries, thereby increasing the requirement for police protection facilities and personnel, buildout of the 2015 General Plan Update would not greatly impact SMPD because the increase in resident and worker populations would be nominal and because SMPD does not base service needs strictly on population ratios and instead staffs the levels of one supervisor and one officer per shift based primarily on call volume estimates. As such, the General Plan EIR found that impacts to police protection services would not be significant.

6. ENVIRONMENTAL SETTING

A. Existing Conditions

SMPD, which operates out of its headquarters at 242 W. Sierra Madre Boulevard, provides police protection to the City of Sierra Madre. In addition to crime prevention, SMPD also enforces and monitors traffic violations, investigates crimes, and handles code enforcement in the absence of the City's Code Enforcement Officer. SMPD also participates in a mutual-aid agreement with Los Angeles County under the California Mutual Aid Program. Under the agreement, SMPD is available on an as-needed basis to the Los Angeles County Sheriff's Department. On a day-to-day basis, SMPD is also available to assist local agencies as part of a mutual-aid agreement with the cities of Pasadena, Arcadia, and Monrovia.

1) *Staffing*

SMPD has full- and part-time personnel that are supported by reserve police members. Current SMPD full-time staffing includes: 1 chief of police, 1 police captain, 4 sergeants, 2 corporals, 9 officers (including detective & traffic), 1 services division supervisor, and 4 dispatchers.[12] The Department is also supported by 2 community support officers, 16 active volunteers, and 5 reserve officers.[13]

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[11] *City of Sierra Madre, Police Department Annual Report 2018.*

[12] *City of Sierra Madre, Police Department website, available at: https://www.cityofsierramadre.com/cityhall/departments/police_department, accessed June 29, 2021.*

[13] *City of Sierra Madre, Police Department Annual Report 2018.*

Additionally, pursuant to Chapter 2.60 (Reserve Police Officers) of the City's Municipal Code, 5 reserve police officers volunteer their time by assisting with a variety of law enforcement duties, from providing additional staffing at special City functions to assisting after natural disasters. Furthermore, SMPD has 18 volunteers that donate their time to perform administrative tasks and assist in community events, in accordance with Chapter 2.60 of the City's Municipal Code. SMPD does not use an officer-to-resident population ratio. Instead, SMPD staffs one supervisor and one officer per shift based primarily on expected call volume.

2) *Funding*

Funding for the City's police services are provided by various means, including the City's General Fund. According to the City's Annual Budget Report for 2020-2021, proposed General Fund allocations for the 2020-2021 fiscal year for SMPD is $2,522,332 for police personnel (including benefits) and $252,850 for maintenance and operations, totaling to $2,775,182. SMPD also receives additional funding from the following state and federal resources:

Asset Forfeiture Fund. Derived from illegal drug-related assets seized in the course of narcotic investigations through the federal and state government.

Citizens Option for Public Safety Fund. Obtained from a half-cent sales tax (Proposition 172) that California voters passed in 1993 and are designated for local public safety.

State Homeland Security Fund. Federal funding passed through the state and onto the City, allocated most recently to ensure radio operability for countywide public safety agencies.

Seat Belt Compliance Fund. Derived from a state grant to reimburse police departments for citing motorists for seatbelt violations.

911 Fund. State grant providing reimbursement for some costs associated with 911 emergency communication systems.

DUI (Driving under Influence) Enforcement Fund. Los Angeles County fund offering reimbursement for overtime when officers are assigned for one night to a regional DUI task force.

Movie Details Fund. Provides overtime pay for officers assigned to filming jobs as mandated by the Sierra Madre Municipal Code.

Police Donation Fund. Consists of donations from groups and individuals to SMPD, used primarily for youth-related activities.

Another source of funding is through the collection of Public Facilities Fees, in accordance with Chapter 15.52 (Public Facilities Fee) of the City's Municipal Code. Pursuant to Chapter 15.52, all new development must pay a Public Facilities Fee to offset the proposed development's potential impact on public facilities demand.[14] Public facilities include services such as water, sewer, parks, police, fire, and library services.

[14] *For purposes of assessing Public Facilities Fees, new development does not include that which replaces existing development, but applies only to additional residential units or non-residential square footage created by new development.*

Fees are collected at the time of issuance of building permits, as outlined in Section 15.52.050 (Timing of Payment).

3) *Performance Standards and Statistics*

Calls for service have steadily increased over the years. In 2018, SMPD received 15,179 calls for service, including a total of 2,125 calls to 911. In the same year, average response times were 2:18 for Priority One Calls (highest priority needing emergency response) and 3:23 for Non-Priority Calls.

Crime statistics for 2017 and 2018, which are the latest available statistics from SMPD, are presented in **Table V.J.2-1, Crime Statistics for 2017-2018**. As shown in **Table V.J.2-1**, there has been a small increase in total cases assigned to the detective bureau and number of arrests. Commercial burglaries and general thefts from motor vehicles have decreased since 2017, however, there was an increase in residential and vehicle burglaries.

Table V.J.2-1
Total Crime Statistics for 2017-2018

	2017	2018	Percent Change
Detective Bureau Cases	745	786	5.5
Cases Cleared	291	331	13.7
Cases Closed	263	238	-9.5
Cases Still Active	14	28	100.0
Cases Inactive	164	148	-9.8
Cases Deemed Unfounded	13	41	215.4
Search Warrants Issued	17	6	-64.7
Total Arrests	248	276	11.3
Adult Arrests	--	267	--
Juvenile Arrests	--	9	--
Violent Crimes	--	8	--
Property Related Crimes	--	108	--
Residential Burglary	18	23	27.8
Commercial Burglary	8	2	-75.0
Vehicle Burglary	6	13	116.7
Theft From Vehicle	18	17	-5.6
Traffic Enforcement Stops	2,747	3,000	9.2
Citation Issued	837	1,450	73.2
Written Warnings Issued	79	65	-17.7
Verbal Warnings Issued	1,831	1,485	-18.9
Traffic Accidents	85	38	-55.3
Non-Injury	72	25	-65.3
Injury	13	13	0.0
Parking Citations Issued	2,596	1,605	-38.2

Notes:
-- = Datum not available
Sources: City of Sierra Madre, Police Department Annual Report 2017 and City of Sierra Madre, Police Department Annual Report 2018.

4) *Housing Element Project Sites*

Site 1

Site 1 includes nine parcels along Mariposa Avenue and Lima Street that are currently developed with single- and multi-family residential uses. Site 1 is located directly southwest of SMPD, with the eastern portion of the site immediately adjacent to the rear of the station.

Site 2

Site 2 includes ten parcels along Suffolk Avenue and Baldwin Avenue developed with older multi-family development. Site 2 is located approximately 0.4-mile southeast of SMPD.

Site 3

Site 3 includes one parcel along Sierra Madre Boulevard that is currently developed with four older multi-family residential buildings, open space, and parking areas. Site 3 is located approximately 0.25-mile west of SMPD.

Site 4

Site 4 includes one parcel along N. Baldwin Avenue that is currently developed with a single-family residence. Site 4 is located approximately 0.4-mile northeast of SMPD.

Site A

Site A is located on the parking area of St. Rita Catholic Church. Site A is located approximately 0.5-mile northeast of SMPD.

Site B

Site B is located in the parking area of the United Methodist Church. Site B is located approximately 0.5-mile west of SMPD.

Site C

Site C is located on the parking area of the Old North Church. Site C is located approximately 0.1-mile northeast of SMPD.

Site D

Site D is located on asphalt play areas and the parking area of the Bethany Church and School. Site D is located approximately 0.3-mile northeast of SMPD.

B. Regulatory Setting

1) *State*

California Vehicle Code

Section 21806 of the California Vehicle Code (CVC) pertains to emergency vehicles responding to Code 3 incidents/calls. This section of the (CVC) states the following:

> *Upon the immediate approach of an authorized emergency vehicle which is sounding a siren and which has at least one lighted lamp exhibiting red light that is visible, under normal atmospheric conditions, from a distance of 1,000 feet to the front of the vehicle, the surrounding traffic shall, except as otherwise directed by a traffic officer, do the following: (a) (1) Except as required under paragraph (2), the driver of every other vehicle shall yield the right-of-way and shall immediately drive to the right-hand edge or curb of the highway, clear of any intersection, and thereupon shall stop and remain stopped until the authorized emergency vehicle has passed. (2) A person driving a vehicle in an exclusive or preferential use lane shall exit that lane immediately upon determining that the exit can be accomplished with reasonable safety. (b) The operator of every street car shall immediately stop the street car, clear of any intersection, and remain stopped until the authorized emergency vehicle has passed. (c) All pedestrians upon the highway shall proceed to the nearest curb or place of safety and remain there until the authorized emergency vehicle has passed.*

California Constitution Article XIII, Section 35

Section 35 of Article XIII of the California Constitution was adopted by the voters in 1993 under Proposition 172. Proposition 172 directed the proceeds of a 0.50-percent sales tax to be expended exclusively on local public safety services. California Government Code Sections 30051-30056 provide rules to implement Proposition 172. Public safety services include police protection. Section 30056 mandates that cities are not allowed to spend less of their own financial resources on their combined public safety services in any given year compared to the 1992-93 fiscal year. Therefore, an agency is required to use Proposition 172 to supplement its local funds used on police protection services, as well as other public safety services. Section 35 at subdivision (a)(2) provides: "The protection of public safety is the first responsibility of local government and local officials have an obligation to give priority to the provision of adequate public safety services." In City of Hayward v. Board of Trustee of California State University (2015) 242 Cal. App. 4th 833, the court found that Section 35 of Article XIII of the California Constitution requires local agencies to provide public safety services, including police protection, and that it is reasonable to conclude that the City will comply with that provision to ensure that public safety services are provided.[15]

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[15] *City of Hayward v. Board Trustee of California State University (2015) 242 Cal. App. 4th 833, 847, https://caselaw.findlaw.com/ca-court-of-appeal/1719667.html, accessed June 29, 2021.*

California Penal Code

All law enforcement agencies in California are organized and operated in accordance with the applicable provisions of the California Penal Code. This code sets forth the authority, rules of conduct, and training for peace officers. Under state law, all sworn municipal and county officers are state peace officers.

2) ***Local***

City of Sierra Madre Municipal Code

The following provisions from the City's Municipal Code focus on police services impacts associated with new development projects and are relevant to the General Plan Update:

- **Title 2 (Administration and Personnel) Chapter 2.60 (Reserve Police Force).** Organizes a reserve police force of a maximum of 25 volunteer members appointed by the Chief of Police to assist Sierra Madre Police Department with enforcement of the law and maintenance of peace and order.
- **Title 15 (Buildings and Construction) Chapter 15.52 (Public Facilities Fee).** Imposes a fee as a condition of issuance of any project permit to mitigate potential impacts of new developments on public facilities.

City of Sierra Madre 2035 General Plan

The following are relevant policies and implementation measures of the Sierra Madre General Plan and Implementation Program.

General Plan Policies

Community Services Element

- Policy C1.1: Provide professional police response and protection to the community by partnering with residents, business persons and visitors to the City.
- Policy C1.2: Assess the impact of increases in population on response time, calls for service and traffic through the development review process so law enforcement assets will not be degraded.
- Policy C2.1: Maintain and enhance public awareness and participation in crime prevention in residential and business areas.
- Policy C2.2: Expand existing programs that deal with personal safety such as police-sponsored safety courses and neighborhood/business watch programs.
- Policy C2.3: Educate selected groups such as seniors pertaining to crime directed at them.
- Policy C3.1: Evaluate on a continual basis the delivery of police services to monitor their adequacy and responsiveness to community needs.

- Policy C3.2: Encourage an open dialogue with the community to address the concerns of residents, visitors and business owners to resolve issues of responsiveness and sensitivity.

- Policy C3.3: Involve other City departments when necessary to resolve matters that fall outside the scope of law enforcement or code enforcement activity.

- Policy C3.4: Continually evaluate the training of law enforcement personnel and their interaction with the citizens of Sierra Madre.

- Policy C4.1: Educate residents, businesses and visitors about disaster preparedness.

- Policy C4.2: Train law enforcement and all other staff on their role in disaster response and recovery.

- Policy C4.3: Maximize passive prevention measures for new and existing development through the development review process.

- Policy C4.4: Work with Sierra Madre's Community Emergency Response Team to have a unified and coordinated response to disasters.

- Policy C4.5: Coordinate with Sierra Madre's Emergency Radio Station (1630 AM), so that when disaster strikes, information can be quickly disseminated to the Community.

- Policy C5.1: Maintain a code enforcement officer in the Police Department or in the Planning and Community Preservation Department who is charged with the duty of identifying violations and enforcing City Codes.

- Policy C5.2: Attempt to obtain voluntary code compliance within reasonable time frames prior to taking legal action.

- Policy C5.3: Utilize nuisance abatement procedures and legal action through the criminal court system when voluntary code compliance is not effective.

- Policy C5.4: Respond to complaints from the public in a timely manner.

- Policy C5.5: Conduct targeted, pro-active code enforcement of violations involving matters of concern to the community.

<u>Implementation Program Measures</u>

Law Enforcement Implementation Program

- Measure IM-1: The City will seek to respond to all calls for service within three minutes of a dispatched call. The City will also increase the number of monthly neighborhood watch meetings throughout the City and will hold bi-annual community Town Hall meetings to educate the community and senior citizens on crime prevention.

- Measure IM-2: The City will review all proposed tract maps and multi-family development to assess the impact of increases in population on response time, calls for service and traffic.
- Measure IM-3: The City will seek to identify more Neighborhood Watch block captains & Business Watch participants to increase crime prevention awareness and vigilance.
- Measure IM-4: The City will partner with other City departments to facilitate their notification and/or response to citizen request for service traditionally outside the normal course and scope of the Police Department.
- Measure IM-5: The City will conduct regular quality of service audits with citizens who have interaction with police personnel. The quality of service audits will help identify issues of concern with overall quality of police service, and help determine critical training needs that may be needed to enhance the overall service by police personnel. In addition, ongoing training will be provided to police personnel in community policing and human relations.
- Measure IM-6: The City will partner with Community Emergency Response Team (CERT) volunteers to provide regular public safety and disaster preparedness training to citizens during neighborhood watch meetings, town hall meetings, and business watch meetings. In addition, efforts will be made to encourage all citizen and visitors to the City to participate in disaster preparedness programs sponsored by the Fire Department and CERT.
- Measure IM-7: The City will provide, with the assistance of the Community Emergency Response Team (CERT), community education programs in emergency response and disaster preparedness for City residents.
- Measure IM-8: The City will train all sworn police personnel and all other staff on the implementation of Standardized Emergency Management System (SEMS) plan to address disasters such as earthquakes, flooding, fire, extreme weather, hazardous material spills, and other accidents.
- Measure IM-9: The City will develop and maintain an Emergency Operations Plan and Natural Hazard Mitigation Plan, and will update it as needed.
- Measure IM-10: The City will partner with the Fire Department, Community Emergency Response Team (CERT) and Emergency Radio Station 1630 AM volunteers to coordinate disaster response and dissemination of information during a disaster.
- Measure IM-11: City will review existing ordinances and amend as necessary to incorporate hazard prevention measures for new and existing development.
- Measure IM-12: The City will continue to maintain a Code Enforcement Officer to respond to complaints from the public in a timely manner and ensure compliance with City codes and regulations.
- Measure IM-13: The City will work with residents and business owners to ensure code compliance in order to avoid the need for legal action. When such efforts have been exhausted, the City will follow Code Enforcement procedures to resolve violations.

- Measure IM-14: The City will identify and address Code violations that warrant pro-active, targeted Code enforcement efforts.

7. ENVIRONMENTAL IMPACTS AND MITIGATIONS

A. Threshold of Significance

Appendix G of the CEQA Guidelines provides thresholds address impacts related to police protection services. Specifically, the Guidelines state that the proposed project may have an adverse significant police protection services impact if it would:

b) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objective for police protection.

B. Project Impacts and Mitigation Measures

Impact J-2: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objective for police protection?

Impact Analysis:

The 2015 General Plan EIR determined that although future development in accordance with the 2015 General Plan Update would introduce new residents and workers into the Sierra Madre Police Department service boundaries, thereby increasing the requirement for police protection facilities and personnel, buildout of the 2015 General Plan Update would not greatly impact SMPD because the increase in resident and worker populations would be nominal and because SMPD does not base service needs strictly on population ratios and instead staffs the levels of one supervisor and one officer per shift based primarily on call volume estimates. Furthermore, the 2015 General Plan Update and Implementation Program include policies and implementation measures that would help maintain adequate levels of services and reduce impacts of potential development projects on police services. Individual development projects within the City would also be reviewed by the City and would be required to comply with the requirements in effect at the time building permits are issued, and if increased demand for additional personnel, facilities, and operational costs do emerge due to buildout of the 2015 General Plan Update, the costs would be funded and offset through the increased tax revenue generated and deposited into the City's General Fund (in which SMPD receives annual funding) from the additional development. As such, the 2015 General Plan EIR found that impacts to police protection services would not be significant.

The project proposes land use designation changes, rezoning, and updates to the General Plan Land Use, Safety, and Circulation Elements. The update to the Land Use Element includes establishing two new multi-family residential land use categories (R-3-20 and R-3-30), creating an Affordable Housing Overlay on select congregational sites, along with minor changes to the Land Use table and map to accommodate residential land uses on the sites identified to meet the RHNA allocation. The update to the Safety Element includes policies related to limiting risk from wildfire, including avoiding development in Very High Fire

Hazard Severity Zones (VHFHSZ) updating maps related to fire hazards, and developing a Vegetation Management Program. The update to the Circulation Element includes minor updates to the existing setting and a policy update related to the City's adoption of VMT thresholds.

Changes in land use designations, rezoning, and updates to the Land Use Element would allow for an increase in residential service population for SMPD. Specifically, as detailed in **Section IV.I, Population and Housing**, of this Draft SEIR, an increase in 483 residents could occur within the City. However, SMPD does not base service needs strictly on population ratios and instead staffs the levels of one supervisor and one officer per shift based primarily on call volume estimates. An additional 483 residents would not be substantial and any associated increase in call volumes would also not be expected to be substantial. In addition, as with development that would be supported by the 2015 General Plan Update, individual development projects that would be supported by the project would be required to perform project-level evaluation of potential impacts to police protection service on a case-by-case basis. Furthermore, the policies and implementation measures designed to reduce potential impacts related to police protection services contained in the General Plan and detailed in the 2015 General Plan EIR would continue to apply to development that could occur under the project. Through the City's regular budgeting efforts, SMPD's resource needs, including staffing, equipment, and possibly station expansions would be identified and funds allocated according to the priorities at the time. Should additional cost arise from potential future development supported by the project, costs would continue to be offset through additional tax revenue generated by the individual developments through the City's General Fund. Lastly, the increases in traffic from the additional development that could occur under the project would not greatly affect police vehicle response because, pursuant to California Vehicle Code Section 21806, emergency vehicles have priority on streets and options to avoid traffic such as the use of sirens and ability to drive in opposing traffic lanes.[16]

Updates to the Safety Element would serve to reduce the City's risks from wildfire and would not have the potential to impact police protection service.

Updates to the Circulation Element are primarily ministerial and pertain to the City's approach for analyzing transportation-related environmental impacts. No changes to roadway classifications or function that would have the potential to alter traffic citations or incidents are proposed or would occur as a result of the project.

Based on the above, no new significant impacts to police protection service would occur as a result of the project and, as with the 2015 General Plan EIR, impacts would be less than significant.

Mitigation Measures:

None required.

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[16] *California Vehicle Code, Section 21806, available at: https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=VEH&sectionNum=21806, accessed June 29, 2021.*

8. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Similar to the findings of the 2015 General Plan EIR, all impacts will be reduced to less-than significant levels. No mitigation measures are necessary.

9. INTRODUCTION

This section of the SEIR analyzes the potential environmental effects related to school services from implementation of the proposed project. Information in this section is based in part of the Pasadena Unified School District (PUSD) website and the Arcadia Unified School District (AUSD) website.[17,18]

A. 2015 General Plan EIR Analysis and Conclusions

The 2015 General Plan EIR determined that although future development in accordance with the 2015 General Plan Update would introduce new students into the City, which would affect school enrollment capacities, PUSD would be able to adequately serve the student population and the small area of the City that is served by AUSD would not see an increase in development under the 2015 General Plan Update. As such, the 2015 General Plan EIR found that impacts to school services would not be significant.

10. ENVIRONMENTAL SETTING

A. Existing Conditions

The majority of students in the City of Sierra Madre are served by PUSD, with a small area in the northeastern portion of the City being served by AUSD. PUSD schools for Sierra Madre student residents include Sierra Madre Elementary School and Sierra Madre Middle School. Pasadena High School, which also serves Sierra Madre residents for grades 9-12, is located in the City of Pasadena. The AUSD schools that serve the small area in the northeastern portion of Sierra Madre include Highland Oaks Elementary School, Foothills Middle School and Arcadia High School, all located in the City of Arcadia.

PUSD provides educational services to students in kindergarten to 12th grade. PUSD oversees 13 elementary schools (grades K-5), 1 grades K-8 school, 3 middle schools (grades 6-8), 2 grades 6-12 schools, 2 high schools (grades 9-12), 1 continuation high school, and 1 alternative education school.[19] The majority of students living in the City of Sierra Madre are within the PUSD school boundaries of Sierra Madre School and Pasadena High School. **Table V.J.3-1, City of Sierra Madre School Enrollments for 2020-2021,** shows the current enrollment and capacity of the two schools.

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[17] *Pasadena Unified School District website, available at: https://www.pusd.us, accessed June 29, 2021.*

[18] *Arcadia Unified School District website, available at: https://www.ausd.net, accessed June 29, 2021.*

[19] *Pasadena Unified School District, About PUSD page, available at: https://www.pusd.us/Domain/40, accessed June 29, 2021.*

Table V.J.3-1
City of Sierra Madre School Enrollments for 2020-2021

School	Address	Current Enrollment [1]	Current Capacity [2]	Remaining Capacity
Sierra Madre Elementary School (Grades K-5)	141 West Highland Avenue Sierra Madre	627	800	173
Sierra Madre Middle School (Grades 6-8)	160 North Canon Sierra Madre	588	650	62
Pasadena High School (Grades 9-12)	2925 East Sierra Madre Boulevard Pasadena	1,842	2,800	958
	TOTAL	**3,057**	**4,250**	**1,193**

1 Source: Pasadena Unified School District, 2020-21 Enrollment Counts by Grade Level and School Site, available at: https://www.pusd.us/site/handlers/filedownload.ashx?moduleinstanceid=12689&dataid=28418&FileName=2020-21%20Norm%20Day%20Enrollment%20Counts%20by%20Grade%20level%20and%20School%20Site.pdf.

2 Current capacity information not available. Capacity information provided in the 2015 General Plan EIR was used. Capacity for Sierra Madre Middle School assumes that construction of the expansion was completed in 2015.

1) *Student Generation Rates*

Student generation rates are used by school districts to estimate the number of students generated by new development in order to determine whether or not existing school facilities would be adequate for future students. Different school districts have varying rates depending on new single- or multi-family dwelling unit developments and also categorize rates based on grade levels. PUSD's student generation rates are 0.13, 0.07, and 0.09 for grades K-5, 6-8, and 9-12, respectively.

2) *Funding*

Pursuant to Section 16.32.070 (School Sites) of the City's Municipal Code, developers who develop or complete the development of a subdivision in the City are required to dedicate land, pay fees in lieu of, or an appropriate pro rata share to PUSD as necessary for construction or expansion of school facilities to maintain an adequate level of public school services to the City's residents. These school facilities impact fees are set by PUSD and are currently $2.24 per square foot for new residential developments and $0.36 per square foot for new commercial developments. In addition to subdivision developments, these school facilities impact fees are also applicable to property owners who add over 500 square feet of floor area to an existing residence, or build a new residence larger than the existing residence.

In November 2008, PUSD voters passed the $350 million Measure TT bond initiative to repair and upgrade PUSD's aging and deteriorating campuses. This would include improving plumbing, heating, ventilation, and fire alarm systems; replacing portable classrooms; enhancing disabled accessibility, implementing energy- and water-saving projects; and modernizing or reconstructing kindergartens, cafeterias, multipurpose facilities, and gyms. Since Measure TT was passed, it has funded 140 projects at PUSD schools. As part of these projects, Sierra Madre Elementary received a new kindergarten classroom building and parking area and Pasadena High School underwent modernization of their Gym Complex, received upgrades to their auditorium stage and new synthetic field and track, and is currently constructing a new central plant.

3) *Housing Element Project Sites*

Site 1

Site 1 includes nine parcels along Mariposa Avenue and Lima Street that are currently developed with single- and multi-family residential uses. Site 1 is located within the PUSD boundaries and is served by Sierra Madre Elementary School, Sierra Madre Middle School, and Pasadena High School.

Site 2

Site 2 includes ten parcels along Suffolk Avenue and Baldwin Avenue developed with older multi-family development. Site 2 is located within the PUSD boundaries and is served by Sierra Madre Elementary School, Sierra Madre Middle School, and Pasadena High School.

Site 3

Site 3 includes one parcel along Sierra Madre Boulevard that is currently developed with four older multi-family residential buildings, open space, and parking areas. Site 3 is located within the PUSD boundaries and is served by Sierra Madre Elementary School, Sierra Madre Middle School, and Pasadena High School.

Site 4

Site 4 includes one parcel along N. Baldwin Avenue that is currently developed with a single-family residence. Site 4 is located within the PUSD boundaries and is served by Sierra Madre Elementary School, Sierra Madre Middle School, and Pasadena High School.

Site A

Site A is located on the parking area of St. Rita Catholic Church. Site A is located within the PUSD boundaries and is served by Sierra Madre Elementary School, Sierra Madre Middle School, and Pasadena High School.

Site B

Site B is located in the parking area of the United Methodist Church. Site B is located within the PUSD boundaries and is served by Sierra Madre Elementary School, Sierra Madre Middle School, and Pasadena High School.

Site C

Site C is located on the parking area of the Old North Church. Site C is located within the PUSD boundaries and is served by Sierra Madre Elementary School, Sierra Madre Middle School, and Pasadena High School.

Site D

Site D is located on asphalt play areas and the parking area of the Bethany Church and School. Site D is located within the PUSD boundaries and is served by Sierra Madre Elementary School, Sierra Madre Middle School, and Pasadena High School.

B. Regulatory Setting

1) *State*

California Education Code

Educational services and school facilities for the Project are subject to the rules and regulations of the California Education Code, the California Department of Education (CDE) and governance of the State Board of Education (CBE) (Gov. Code Section 33000, et seq.). The CDE is the government agency responsible for public education throughout the state. With the State Superintendent of Public Instruction, the CDE is responsible for enforcing education law and regulations and for continuing to reform and improve public elementary school, secondary school, childcare programs, adult education, and preschool programs. The CDE oversees funding, and student testing and achievement levels for all state schools. A sector of the CDE, the SBE is the 11-member governing and policymaking body of the California Department of Education (CDE) that sets Kindergarten through 12th Grade (K–12) education policy in the areas of standards, instructional materials, assessment, and accountability. The state also provides funding through a combination of sales and income taxes. In addition, pursuant to Proposition 98, the state is also responsible for the allocation of educational funds that are acquired from property taxes. Further, the governing board of any school district is authorized to levy a fee, charge, dedication, or other requirement against any construction within the boundaries of the district, for the purpose of funding the construction or reconstruction of school facilities.[20]

Senate Bill 50

The Leroy F. Greene School Facilities Act of 1998 (known as the Greene Act), enacted in 1998, is a program for funding school facilities largely based on matching funds. For new school construction, grants provide funding on a 50/50 state and local match basis. For school modernization, grants provide funding on a 60/40 state and local match basis. Districts that are unable to provide some, or all, of the local match requirement and are able to meet the financial hardship provisions may be eligible for additional state funding.[21]

The Greene Act permits the local district to levy a fee, charge, dedication, or other requirement against any development project within its boundaries, for the purpose of funding the construction or reconstruction of school facilities. The Act also sets a maximum level of fees a developer may be required

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[20] *California Education Code Section 17620(a)(1), available at: https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=EDC&sectionNum=17620, accessed June 29, 2021.*

[21] *State of California, Office of Public School Construction, School Facility Program Guide, October 24, 2012, available at: https://www.dgs.ca.gov/-/media/Divisions/OPSC/Services/Guides-and-Resources/SFP_Hdbk_ADA.pdf?la=en&hash=B871984008A7D2E35D16DB50DDE0C87791C294A7, accessed June 29, 2021.*

to pay. Pursuant to Government Code Section 65996, the payment of these fees by a developer serves to mitigate all potential impacts on school facilities that may result from implementation of a project to a less-than-significant level.[22]

Open Enrollment Policy (Cal. Educ. Code Sections 48350, et seq.)

The open enrollment policy is a state-mandated policy that enables students located in the PUSD service boundaries to apply to any regular, grade-appropriate PUSD school with designated "open enrollment" seats. Open enrollment seats are granted through an application process that is completed before the school year begins. Students living in a particular school's attendance area are not displaced by a student requesting an open enrollment transfer to that school.

Class Size Reduction Kindergarten-University Public Education Facilities Bond Act of 1998

Proposition 1A, the Class Size Reduction Kindergarten-University Public Education Facilities Bond Act of 1998 (Ed. Code, Section 100400–100405) is a school construction funding measure that was approved by the voters on the November 3, 1998 ballot. This Act created the School Facility Program where eligible school districts may obtain state bond funds.

2) *Local*

City of Sierra Madre Municipal Code

The following provision from the City's Municipal Code focuses on school impacts associated with new development projects and are relevant to the General Plan Update:

- **Title 16 (Subdivisions), Chapter 16.32 (Dedications, Improvements and Requirements), Section 16.32.070 (School Sites).** Requires any developer who develops or completes the development of a subdivision in the City to dedicate land, pay fees in lieu of, or an appropriate pro rata share to the school district as necessary for the purpose of constructing or expanding new school facilities to assure residents of the subdivision have adequate public school services.

City of Sierra Madre 2035 General Plan

The following are relevant policies and implementation measures of the Sierra Madre General Plan Update and Implementation Program.

[22] *California Government Code Section 65996, available at: https://codes.findlaw.com/ca/government-code/gov-sect-65996.html, accessed June 29, 2021.*

General Plan Update Policies

Land Use Element

- Policy L41.3: Allow the re-use of existing institutional properties as appropriate for the following uses:
  - Relocation of large institution.
  - Retreat center, civic use or other such uses operated by religious, non-profit or health organizations.
  - Housing for institutional uses such as dormitories.
  - Parkland, open space, and public recreation facilities.
  - School.
- Policy L41.4: Retain all school sites that are needed to meet future educational needs and determine the appropriate use of surplus school property in the context of the City's open space and recreation needs.

Implementation Program Measures

Land Use Implementation Program

- Measure IM-60: The City shall amend the Institutional (I) Zoning Ordinance as necessary to require compatibility with adjacent land uses, require approval of a master plan to allow the expansion of existing institutional sites, and allow re-use of existing properties subject to approval of a conditional use permit (CUP) for the following purposes: relocated large institutions, retreat centers, civic and religious uses, non-profit or health organizations, housing for institutional uses, parkland, open space, public recreation and schools.
- Measure IM-61: The City shall amend the I (Institutional) Zoning Ordinance to prohibit a change of use/zone change of school sites that would allow for uses other than educational uses unless a finding is made that such sites are not needed to meet future educational needs and that consideration has been given to the City's open space and recreation needs.

11. ENVIRONMENTAL IMPACTS AND MITIGATIONS

A. Threshold of Significance

Appendix G of the CEQA Guidelines provides thresholds address impacts related to school services. Specifically, the Guidelines state that the proposed project may have an adverse significant school services impact if it would:

c) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to

maintain acceptable service ratios, response times or other performance objective for schools.

B. Project Impacts and Mitigation Measures

Impact J-3: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objective for schools?

Impact Analysis:

The 2015 General Plan EIR determined that although future development in accordance with the 2015 General Plan Update would introduce new students into the City, which would affect school enrollment capacities, PUSD would be able to adequately serve the student population and the small area of the City that is served by AUSD would not see an increase in development under the 2015 General Plan Update. Furthermore, the 2015 General Plan Update and Implementation Program include policies and implementation measures that would help maintain adequate levels of services and reduce impacts of potential development projects on school services. Individual development projects within the City would also be subject to school impact fee assessments under SB 50. Section 16.32.070 (School Sites) of the City's Municipal Codes also addresses the requirement of school impact fees. As such, the 2015 General Plan EIR found that impacts to school services would not be significant.

The project proposes land use designation changes, rezoning, and updates to the General Plan Land Use, Safety, and Circulation Elements. The update to the Land Use Element includes establishing two new multi-family residential land use categories (R-3-20 and R-3-30), creating an Affordable Housing Overlay on select congregational sites, along with minor changes to the Land Use table and map to accommodate residential land uses on the sites identified to meet the RHNA allocation. The update to the Safety Element includes policies related to limiting risk from wildfire, including avoiding development in Very High Fire Hazard Severity Zones (VHFHSZ) updating maps related to fire hazards, and developing a Vegetation Management Program. The update to the Circulation Element includes minor updates to the existing setting and a policy update related to the City's adoption of VMT thresholds.

Changes in land use designations, rezoning, and updates to the Land Use Element would result in an increase in residential units and an associated increase in student population within the City. However, none of the identified potential development sites are located within the service boundaries of AUSD, therefore, no increase in enrollment at Highland Oaks Elementary School, Foothills Middle School or Arcadia High School would occur as a result of the project. Based on the maximum number of dwelling units that could be developed under the project (211 units) and on PUSD's student generation rates of 0.13, 0.07, and 0.09 for grades K-5, 6-8, and 9-12, respectively, the project could increase PUSD's student population by 28 elementary students, 15 middle school students, and 19 high school students. With a remaining capacity of 173 seats at Highland Oaks Elementary School, 62 seats at Foothills Middle School, and 958 seats at Arcadia High School, PUSD would be able to adequately serve the student population in Sierra Madre with the implementation of the project.

Furthermore, the policies and implementation measures designed to reduce potential impacts related to school services contained in the General Plan and detailed in the 2015 General Plan EIR would continue to apply to development that could occur under the project. As with development that would occur under

the 2015 General Plan Update, individual development projects that would occur under the project would continue to be subject to school impact fee assessments under SB 50. Section 16.32.070 (School Sites) of the City's Municipal Codes also addresses the requirement of school impact fees. These fees are collected by school districts at the time of issuance of building permits for commercial, industrial, and residential projects. The State Legislature has declared that the payment of those fees constitutes full mitigation for the impacts generated by new development, per Government Code Section 65995.

Updates to the Safety Element would serve to reduce the City's risks from wildfire and would not have the potential to impact student generation or school enrollment within the City.

Updates to the Circulation Element are primarily ministerial and pertain to the City's approach for analyzing transportation-related environmental impacts and would not have the potential to impact student generation or school enrollment within the City.

Based on the above, no new significant impacts to schools would occur as a result of the project and, as with the 2015 General Plan EIR, impacts would be less than significant.

Mitigation Measures:

None required.

12. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Similar to the findings of the 2015 General Plan EIR, all impacts will be reduced to less-than significant levels. No mitigation measures are necessary.

13. INTRODUCTION

This section of the SEIR analyzes the potential environmental effects related to park services from implementation of the proposed project. Information in this section is based in part on the City's Recreation website.[23]

A. 2015 General Plan EIR Analysis and Conclusions

The 2015 General Plan EIR determined that although future development in accordance with the 2015 General Plan Update would introduce new residents into the City, which would increase the use of existing parks and recreation facilities and reduce the parkland to resident ratio, the City's location proximate to the San Gabriel Mountains, Bailey Canyon Wilderness Park, and Angeles National Forest provide a substantial amount of parkland and open space for residents in Sierra Madre. As such, the 2015 General Plan EIR found that impacts related to the increased use of parks and recreational facilities would not be significant.

The 2015 General Plan EIR determined that although the 2015 General Plan Update includes a revision to the land use map and modifies the development potential of certain parcels in the City, it does not contain specific development projects nor does it propose new or expanded parks or recreational facilities and individual development projects that would be supported by the 2015 General Plan Update would be required to conduct project-specific analysis of potential impacts to parks and recreation facilities. As such, the 2015 General Plan EIR found that impacts related to the construction or expansion of recreation facilities would be less than significant.

14. ENVIRONMENTAL SETTING

A. Existing Conditions

The City's parks and recreational facilities provide a balance of active- and passive-use spaces, and include a range of amenities. Aside from the parks, Sierra Madre also offers the Bailey Canyon Wilderness Area, the historic Mount Wilson Trail, and specialized recreation centers. Additionally, the City provides a wide range of recreational programs and organized sports.

1) *Parks and Trails*

Parks

The City's parks provide an approximate total of 24 acres of public recreational open space to its residents. Park and facility reservations are also available for select park shelters and recreation facilities such as the

[23] *City of Sierra Madre, Recreation website, available at: https://www.cityofsierramadre.com/services/recreation, accessed June 30, 2021.*

Sierra Madre Room, the Youth Activity Center (YAC), and Hart Park House for banquets, shows, or private events. The parks in Sierra Madre are summarized in **Table V.J.4-1, Sierra Madre Parks**.

Table V.J.4-1
Sierra Madre Parks

Name	Address	Size	Description of Amenities
Bailey Canyon Wilderness Park	451 W. Carter Avenue	15 acres	Picnic areas, drinking fountain, hiking trails, trail marker signage, native botanical area, fire ring, interpretive display, handicap accessibility, outdoor restrooms, and a kiosk.
Kersting Court	Intersection of Baldwin Avenue and Sierra Madre Boulevard	2,500 square feet	Small grassy area, picnic tables and benches, a drinking fountain, and a bell tower.
Memorial Park and Hart Park House Senior Center	222 W. Sierra Madre Boulevard	3.5 acres	Playground, weeping wall, outdoor restrooms, picnic areas, a covered pavilion, band shell, tennis courts, community gardens, Veteran's Memorial Wall, and the Hart Park House/Senior Center building.
Milton and Harriet Goldberg Recreation Area	171 Sunnyside Avenue	0.21 acres	Passive recreation areas, picnic areas, stone benches, native plants, a sand play area, a desert willow hut structure, and a dry stream bed.
Mount Wilson Trail Park	189 E. Mira Monte Avenue	0.34 acres	Playground equipment, picnic tables, open grass areas, restrooms, access to Mount Wilson Trail, and the historic Richardson House and Lizzie's Trail Inn.
Sierra Vista Park	611 E. Sierra Madre Boulevard	5 acres	Community recreation center office, community room, youth activity center, aquatic center, covered pavilion, picnic areas, playground, tennis courts, volleyball court, basketball court, baseball fields, dog park, outdoor restrooms, and the Sierra Madre Rose Float Barn.

Source: Sierra Madre, 2015 General Plan EIR.

In addition to the City's parkland, Sierra Madre is uniquely located at the base of the southern foothills of the San Gabriel Mountains and provides a gateway to the trails within the Angeles National Forest and San Gabriel Mountains National Monument, which offers 557 miles of hiking and equestrian trails,

campgrounds and picnic areas, 270 miles and two designated open areas for off-road vehicles, and encompasses approximately 700,176 acres in total.[24]

Trails

Several trails are available to Sierra Madre residents, including within Bailey Canyon Wilderness Park and Sierra Madre Historical Wilderness Area.

Bailey Canyon Wilderness Park

The Live Oak Self-Guided Nature Trail begins at the entrance to Bailey Canyon above the debris basin. The trail is an easy study (loop) trail in oak woodland area, approximately an eighth of a mile. The Canyon View Self-Guided Nature Trail begins a short distance beyond the footbridge in Bailey Canyon. The trail is approximately one-half mile to a small waterfall. The Bailey Canyon Nature Trails were developed by Sierra Madre Junior Girl Scout Troops 279 and 528 in 1966-1967.

The Bailey Canyon Trail begins at Marker #11 along the Canyon View Nature Trail. Approximately 1 mile in, the trail passes "MacCloud Saddle," where hikers can view evidence of the Sierra Madre Fault. Approximately 2.2 miles in are the "old cabin foundations," which are what remains of two cabins that were built in 1910 by three students at Throop Polytechic Institute (later Cal Tech) and used by the students until the area was closed during World War II. The trail reaches Jones Peak approximately 3.3 miles in.

Sierra Madre Historical Wilderness Area

The Mount Wilson Trail offers an active recreation opportunity for residents and visitors of Sierra Madre. It is the oldest trail in the San Gabriel Mountains and was adapted from an Indian trail by Benjamin (Don Benito) Wilson in 1864 for access to timber. Historically, the trail was used to transport materials, by pack mule, for the Mount Wilson Observatory, built in 1889 by Harvard College. Eventually, the trail became a very popular hiking trail and attracted visitors from all over the country. The trail begins at the corner of Mountain Trail Avenue and E. Mira Monte Avenue and leads to the Mount Wilson Observatory at the mountain's summit, which stands at 5,710 feet above mean sea level. Once on the trail, several trails lead up to the top of Mount Wilson. Aside from its natural resources and beauty (e.g., Sturtevant Falls and vegetation), the Mount Wilson Trail offers amenities such as, parking areas and restrooms, trailheads, campgrounds, and a visitor's center. The historic Lizzie's Trail Inn and Richardson House stand at the entry to the Mount Wilson Trail.

Additional trails, including the Mount Wilson "Toll Road" and Winter Creek to Big Santa Anita Canyon trails connect to the Mount Wilson Trail and offer access to Henniger Flats, Hoegee's Camp (Camp Ivy) and Chantry Flats, as well as amenities such as overnight camping, faucet water, picnic tables, and stoves.

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[24] *United States Department of Agriculture, Forest Service, Pacific Northwest Region, Angeles National Forest, San Gabriel Mountains National Monument Visitor Guide, available at: https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd493608.pdf, accessed June 30, 2021.*

2) *Recreational Centers*

Youth Activity Center

The City's YAC is at 611 E. Sierra Madre Boulevard on the second floor of the Community Recreation Center. Through a partnership with the YMCA, the programs for youth ages 11 to 17 are provided on a year-round basis. Youth members have the opportunity to drop in after school to 6:00 pm Monday through Thursday to participate in engaging activities, including crafts, athletics, and assistance with homework. On Fridays, YAC programming takes place downtown in Kersting Court.

Aquatic Center

The Sierra Madre Aquatic Center is located at 611 E. Sierra Madre Boulevard. Through a partnership with the YMCA, the pool is open year-round offering programs such as swim lessons, lap swimming, water aerobics, swim team, recreational swim, and special events.

Senior Center

Sierra Madre's Hart Park House has served as Sierra Madre's Senior Center for 20 years. Located at 222 W. Sierra Madre Boulevard, the Senior Center is open Monday through Friday and provides daily low-cost lunches for residents ages 60 years and over. The Senior Center also provides recreation opportunities including arts, computer education, gardening, physical fitness activities, health screenings, and educational activities. Additionally, the Senior Center hosts special luncheons and entertainment events, as well as organizes day trips to local places of interest. Other services include workshops and meetings to discuss issues pertinent to seniors. The Senior Center completed a sixth-month major interior renovation in November 2011.

3) *Recreational Programs and Organized Sports*

The City offers a wide range of recreational programs and organized sports to its residents, some through public-private partnerships, including but not limited to:

- After School and Vacation Day Camps
- Special Interest Classes
- Youth/Adult Baseball and Softball Leagues
- Aquatics Programs
- Community Gardens
- Community Excursions
- Family Movie Fridays
- Summer Fun in the Park
- Concerts in the Park

4) *Parkland Standard*

As stated in Section 16.44.030 (General Standard) of the City's Municipal Code, Sierra Madre's general Citywide parkland standard goal for providing adequate park and recreational facilities to its residents is 3 acres per 1,000 residents. Currently, the City maintains 24 acres of parkland. As a result, the park to population ratio – based on the City's existing population of 10,816 (see **Section V.I, Population and Housing**, of this Draft SEIR) – is 2.22 acres of parkland per 1,000 residents. This ratio comes under the

City's minimum standard of 3 acres per 1,000 residents. In order to reach the minimum standard, the City would need approximately 9 additional acres of parkland (for a total of 33 acres of parkland) to reach the desired parkland per resident ratio in the City.

5) *Facility Funding*

Funding for parks and recreational facilities for the City comes primarily through property tax revenues and park fees in lieu of parkland dedication. Chapter 16.44 (Regulations for Dedication of Land for Park and Recreation Land) of the City's Municipal Code outlines the in-lieu fee imposed on all new developments if no park or recreation facilities are designated within the new development's proposed subdivision. The fee is determined by a formula explained in Section 16.44.070 (Amount of Fee in lieu of Land Dedication), consisting of multiple variables such as the number of dwelling units, population per dwelling unit, fair market value, buildable acres of the proposed subdivision, and an additional 20 percent cost towards offsite improvements. The fees collected are used solely for the acquisition, development, improvement, and maintenance of public parks and recreational facilities in the City.

6) *Housing Element Project Sites*

Site 1

Site 1 includes nine parcels along Mariposa Avenue and Lima Street that are currently developed with single- and multi-family residential uses. The nearest park facility to Site 1 is Memorial Park and Hart Park House Senior Center, located less than 0.1-mile east of the site.

Site 2

Site 2 includes ten parcels along Suffolk Avenue and Baldwin Avenue developed with older multi-family development. The nearest park facility to Site 2 is Kersting Court, located approximately 0.15-mile northwest of the site.

Site 3

Site 3 includes one parcel along Sierra Madre Boulevard that is currently developed with four older multi-family residential buildings, open space, and parking areas. The nearest park facility to Site 3 is Milton and Harriet Goldberg Recreation Center, located approximately 0.25-mile southwest of the site.

Site 4

Site 4 includes one parcel along N. Baldwin Avenue that is currently developed with a single-family residence. The nearest park facility to Site 4 is Kersting Court, located approximately 0.25-mile south of the site.

Site A

Site A is located on the parking area of St. Rita Catholic Church. The nearest park facility to Site A is Mount Wilson Trail Park, located approximately 0.25-mile northeast of the site.

Site B

Site B is located in the parking area of the United Methodist Church. The nearest park facility to Site B is Milton and Harriet Goldberg Recreation Center, located approximately 0.3-mile southeast of the site.

Site C

Site C is located on the parking area of the Old North Church. The nearest park facility to Site C is Memorial Park and Hart Park House Senior Center, located less than 0.1-mile south of the site.

Site D

Site D is located on asphalt play areas and the parking area of the Bethany Church and School. The nearest park facility to Site D is Kersting Court, located approximately 0.15-mile southeast of the site.

B. Regulatory Setting

1) *State*

Quimby Act

The Quimby Act (California Government Code Section 66477) was established by the California Legislature in 1965 to provide parks for the growing communities in California. The act authorized cities and counties to adopt ordinances addressing parkland and/or development impact fees on residential subdivisions for the purpose of providing, preserving, and improving open space and recreational facilities. The Quimby Act sets a statewide standard of three acres of parkland for every 1,000 residents, unless the City adopts a higher standard not to exceed five acres per 1,000 residents. The act also specifies acceptable uses and expenditures of the generated revenue.

California Public Park Preservation Act

The primary instrument for protecting and preserving parkland in the state is California's Public Park Preservation Act of 1971. Under the California Public Resource Code, cities and counties may not acquire any real property that is in use as a public park for any non-park use unless compensation, land, or both, are provided to replace the parkland acquired. This provides no net loss of parkland and facilities.

2) *Local*

City of Sierra Madre Municipal Code

Title 16 (Subdivision), Chapter 16.44 (Regulations for Dedication of Land for Park and Recreation Land) of the City's Municipal Code requires parkland dedication or in-lieu park fees for all new developments to ensure the City provides its residents with adequate parks and recreational activities. The dedication of parkland is based on a formula that accounts for the type of dwelling unit (i.e., single-family, duplex, cluster, apartments, etc.) and average density being proposed, as outlined in Section 16.44.040 (Formula for Dedication of Land). If no park or recreation facility is designated within the proposed subdivision to serve the immediate and future needs of the residents of the subdivision, the developer is required to, in lieu of dedicating land, pay a fee equal to the value of that land using a formula outlines in Section 16.44.050 (Formula for Fees In Lieu of Land Dedication). The revenue generated from this fee is required

to be used only for the purpose of acquiring necessary parkland and developing new or rehabilitating existing parks or recreational facilities reasonably related to serving the subdivision development. Section 16.44.030 (General Standard) sets a general citywide standard of three acres of parkland per 1,000 residents to ensure an adequate amount of neighborhood and community parks exist within the City to serve its residents. The standard is in accordance with the parkland requirements of the Quimby Act.

City of Sierra Madre 2035 General Plan

The following are relevant policies and implementation measures of the Sierra Madre General Plan Update and Implementation Program.

General Plan Policies

Land Use Element

- Policy L10.8: Require that new development be designed in a way which preserves the flood control channel as an open space focal point.
- Policy L24.4: Require that buildings include useable common open space in addition to private patios and balconies.
- Policy L33.7: Encourage the development of outdoor spaces for dining, and public gathering spaces.

Resource Management Element

- Policy R3.2: Ensure that wildland open space, including the areas of the City designated as High Fire Hazard Severity Zone, is left in its natural state with the exception of brush abatement for public safety in order to aid the City in fighting fires.
- Policy R2.2: Designate properties purchased by the Conservancy and other non-profit organizations as natural open space utilizing conservation easements.
- Policy R2.1: Assist the Sierra Madre Mountains Conservancy and other non-profit organizations in the application of funds to purchase hillside property, and when feasible, to provide public access to the mountains via parks and trails.

Community Services Element

- Policy C6.1: Provide quality programs for youth, adults, and seniors that meet the needs of the community within the City's limited budget.
- Policy C6.2: Explore the feasibility of offering additional weekend classes and programs for youth, adults and seniors.
- Policy C6.3: Monitor and evaluate recreation programs and facility usage, including surveying program participants and the general citizenry.

- Policy C6.4: Notify City residents seasonally on the types of recreational programs, special events and facilities available.
- Policy C6.5: Encourage sponsorships of programs by local businesses and participation from the community.
- Policy C6.6: Explore the possibility for special events involving running and bicycle programs
- Policy C7.1: Continue to seek outside funding to keep facilities retrofitted to meet the requirements of the Americans with Disabilities Act.
- Policy C7.2: Continue to create programs that can accommodate the physically challenged.
- Policy C8.1: Continue a park maintenance program to secure the existing nature and beauty of City Parks and open space areas.
- Policy C8.2: Involve community youth in park maintenance efforts.
- Policy C8.3: Install and replace existing landscape with native and drought resistant plants in City parks where deterioration has occurred.
- Policy C8.4: Identify each recreational site with its name and encompassing facilities with signage visible to the public.
- Policy C8.5: Continue to improve the conditions of Hal Dapper Field to maintain the field's safety and usability.
- Policy C8.6: Continue to coordinate with Pasadena Unified School District, Saint Rita's, Bethany School, Alverno High School, La Salle High School and Passionist Father Monastery Retreat Center with regards to the feasibility of utilizing their properties for recreational or special event use during non-operational hours.
- Policy C8.7: Continue the public-private partnerships to improve and maintain the existing municipal pool facilities.
- Policy C8.8: Continue a maintenance program for the City's recreation center to include routine and long-term maintenance of the facility.
- Policy C8.9: Research better use of existing City open space.
- Policy C9.1: Continue to monitor and assess the needs of the senior community.
- Policy C9.2: Continue to provide hot lunches Monday through Friday to seniors at a feasible cost to participants (Nutrition Program).
- Policy C9.3: Work in cooperation with other agencies to sponsor a daily hot lunch program to home-bound seniors (Meals on Wheels).

- Policy C9.4: Provide educational programs for the community, especially senior citizens including but not limited to healthcare, retirement planning, health screening, public and personnel safety, tax assistance, and mature driver courses.

- Policy C9.5: Maintain the Senior Center to provide additional senior activities and community meeting space.

- Policy C9.6: Maintain a senior volunteer core to assist in accomplishing goals.

- Policy C9.7: Update the Senior Master Plan.

- Policy C9.8: Improve and maintain the Hart Park House to better serve its seniors.

- Policy C9.9: Continue to work in conjunction with the Senior Community Commission to provide programming such as excursions, special events and educational programs.

- Policy C10.1: Explore the possibility of creating new activity centers such as a multi-purpose ball field for soccer, baseball, softball, football, a roller hockey rink, skate park, and community gymnasium or a center for family recreation activities.

- Policy C10.2: Develop relationships with public and private facilities such as family entertainment and recreation centers, to be used for additional youth activities and special events.

- Policy C10.3: Expand funds for park acquisition using Quimby Act, State park funds, Bicycle Fund, fund-raising and business contributions, State and Federal grants.

- Policy C10.4: Require that all new commercial and residential subdivision developments provide open space areas on-site for passive or active recreation or contribute fees for public development of such uses.

- Policy C10.5: Evaluate additional means of obtaining land and funding for the purpose of purchasing parkland.

- Policy C11.1: Maintain a Parks and Facilities Master Plan that identifies existing facilities and uses, existing programs and services, existing open space recreation areas and proposed acquisition, developments and improvements.

- Policy C11.2: Maintain and update a maintenance and repair plan for existing and future City facilities.

- Policy C12.1: Explore the feasibility of a bicycle lane throughout the City for recreational and transportation usage.

Implementation Program Measures

Recreation Services Implementation Program

- Measure IM-2: The City will continue to host annual special events such as the Huck Finn Fishing Derby, Mount Wilson Trail Race, Fourth of July Festivities, Concerts in the Park, Family Movie Fridays and Halloween Happenings.
- Measure IM-3: The City will meet with local sports organizations (including, but not limited to, the Sierra Madre Little League, Sierra Madre Girls Softball Association, Sierra Madre Pony, Pasadena Unified and AYSO Region 2) on a bi-annual basis to plan for upcoming seasons.
- Measure IM-5: The City will continue to work with Waterworks, or another aquatics services provider, to provide aquatic services for youth, adults and seniors.
- Measure IM-7: The City will utilize the special event committees to secure sponsorships for events and programs.
- Measure IM-8: The City will reach out to community cycling and running businesses to partner for cycling and/or running-based event.
- Measure IM-11: The City will reach out to local schools or the YMCA Teen Leadership Club to create a volunteer program for park maintenance/clean-up with the Sierra Madre Environmental Action Council.
- Measure IM-12: The City will seek to secure grants to fund replacement of park landscape with native plants and drought-resistant landscaping.
- Measure IM-14: The City will continue to work with the Sierra Madre Pony League to improve the field conditions at Dapper Field.
- Measure IM-15: The City will continue partnership with Pasadena Unified School District and Alverno High School to share use of facilities.
- Measure IM-16: The City will reach out to St. Rita's, Bethany and La Salle schools to seek out opportunities for shared use of facilities through creation of a Memorandum of Understanding.
- Measure IM-18: Utilize the Parks and Facilities Master Plan Scorecard to research new opportunities for open space use.
- Measure IM-22: The City will continue to partner with the Senior Community Commission to provide monthly senior programs such as special activities, lunch and learn and the movie series.
- Measure IM-24: The City will continue to seek out volunteers to assist with programs like the daily lunch service and to provide classes such as chair yoga and strength training.
- Measure IM-27: The City will create a Community Services subcommittee to explore the possibility of building new recreational facilities.
- Measure IM-28: The City will designate staff to reach out to local private and public organizations for shared use of facilities.

- Measure IM-29: The City will agendize for Community Services Commission to provide direction regarding the expansion of funding grants for park acquisition.
- Measure IM-30: The City will amend the Subdivision Ordinance to include a requirement for new commercial and residential subdivisions to provide open space or contribute fees as part of new development.
- Measure IM-31: The City will coordinate with the interest groups, such as the Sierra Madre Mountain Conservancy, in order to evaluate their ability to acquire new land for City parks.
- Measure IM-32: The City will complete a Parks and Facility Master Plan Scorecard.
- Measure IM-33: The City will partner with other municipalities that have created new bike lanes for recreational and transportation uses.

15. ENVIRONMENTAL IMPACTS AND MITIGATIONS

A. Threshold of Significance

Appendix G of the CEQA Guidelines provides thresholds address impacts related to school services. Specifically, the Guidelines state that the proposed project may have an adverse significant parks and recreation impact if it would:

d) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objective for parks.

B. Project Impacts and Mitigation Measures

Impact J-4: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objective for schools?

Impact Analysis:

The 2015 General Plan EIR determined that although future development in accordance with the 2015 General Plan Update would introduce new residents into the City, which would increase the use of existing parks and recreation facilities and reduce the parkland to resident ratio, the City's location proximate to the San Gabriel Mountains, Bailey Canyon Wilderness Park, and Angeles National Forest provide a substantial amount of parkland and open space for residents in Sierra Madre. Future residents would also have access to a number of existing recreational centers and programs, as well as organized sports. In addition, pursuant to Chapter 16.44 (Regulations for Dedication of Land for Park and Recreation Land) of the City's Municipal Code, the City requires and would continue requiring parkland dedications or collecting park in-lieu fees for all new developments, which would go towards funding the City's park maintenance, expansion, and/or acquisition of parkland. Furthermore, the 2015 General Plan Update does not include changes to open space/parkland use designations and, along with the Implementation Program, contains policies and implementation measures, respectively, designed to minimize impacts on

open space and recreation facilities, including changing the previous Open Space and Hillside land use designations to Natural Open Space, ensuring that the City's hillside and some of the foothill areas would remain natural open space. As such, the 2015 General Plan EIR found that impacts related to increased usage of parks and recreation services would not be significant.

In addition, the 2015 General Plan EIR also determined that although the 2015 General Plan Update includes a revision to the land use map and modifies the development potential of certain parcels in the City, it does not contain specific development projects nor does it propose new or expanded parks or recreational facilities. Individual development projects that would be supported by the 2015 General Plan Update would be required to conduct project-specific analysis of potential impacts to parks and recreation facilities. Furthermore, the 2015 General Plan Update and Implementation Program contain policies and implementation measures designed to minimize impacts of any future expansion or development of new park and recreation facility projects. As such, the 2015 General Plan EIR found that impacts related to the construction or expansion of recreation facilities would be less than significant.

The project proposes land use designation changes, rezoning, and updates to the General Plan Land Use, Safety, and Circulation Elements. The update to the Land Use Element includes establishing two new multi-family residential land use categories (R-3-20 and R-3-30), creating an Affordable Housing Overlay on select congregational sites, along with minor changes to the Land Use table and map to accommodate residential land uses on the sites identified to meet the RHNA allocation. The update to the Safety Element includes policies related to limiting risk from wildfire, including avoiding development in Very High Fire Hazard Severity Zones (VHFHSZ) updating maps related to fire hazards, and developing a Vegetation Management Program. T The update to the Circulation Element includes minor updates to the existing setting and a policy update related to the City's adoption of VMT thresholds.

The project does not include any changes to open space/park land use designations, however, changes in residential land use designations, rezoning, and updates to the Land Use Element would result in an increase in residential units and an associated increase in demand for and usage of parks and recreation facilities within the City. Specifically, as detailed in **Section V.I, Population and Housing**, of this Draft SEIR, a maximum increase of 483 residents could occur within the City, taking the existing population of 10,816 persons to 11,299 persons. Based on the City's minimum parkland standard of 3 acres per 1,000 residents, development that would be supported by the project could generate a demand for an additional 1.4 acres of parkland. Currently, the City provides 2.22 acres of parkland per 1,000 residents. At buildout of the General Plan Update, the new parkland ratio would be reduced to 2.12 acres per 1,000 residents. Therefore, the City would continue to not be able to meet its minimum goal of 3 acres per 1,000 residents, in accordance with the parkland provision of Section 16.44.030 (General Standard) of the City's Municipal Code.

However, as stated above, the City is uniquely located at the base of the San Gabriel Mountains foothills and Bailey Canyon Wilderness Park provides multiple trailheads into the Angeles National Forest, which offers over 557 miles of multipurpose trails and consists of approximately 700,176 acres of open space and protected natural land. Therefore, although the City would continue to not meet its parkland standard of 3 acres of parkland per 1,000 residents, the nearby Angeles National Forest provides a substantial amount of parkland and open space for residents of Sierra Madre, as well as neighboring cities of Arcadia and Pasadena. The Angeles National Forest offers a large network of multipurpose trails, developed campgrounds, picnic areas, swimming, fishing, skiing, and various other seasonal activities. In addition to the various City parks available to Sierra Madre residents, current and future residents also continue to have access to a number of recreational centers (e.g., Youth Activity Center, Aquatic Center, and Senior

Center) and recreational programs and organized sports (e.g., special interest classes, aquatics programs, community gardens and excursions, concerts in the park). Furthermore, the policies and implementation measures designed to minimize impacts on open space and recreation facilities contained in the General Plan and detailed in the 2015 General Plan EIR would continue to apply to development that could occur under the project. As with development that would occur under the 2015 General Plan Update, individual development projects that would occur under the project would continue to be subject to Chapter 16.44 (Regulations for Dedication of Land for Park and Recreation Land) of the City's Municipal Code, which requires parkland dedications or the payment of in-lieu fees for all new developments. The in-lieu fees are collected to fund the City's park maintenance, expansion, and/or acquisition of parkland.

Updates to the Safety Element would serve to reduce the City's risks from wildfire and would not have the potential to impact the usage of parks and recreation facilities within the City.

Updates to the Circulation Element are primarily ministerial and pertain to the City's approach for analyzing transportation-related environmental impacts and would not have the potential to impact the usage of parks and recreation facilities within the City.

Based on the above, no new significant impacts to parks and recreation facilities would occur as a result of the project and, as with the 2015 General Plan EIR, impacts would be less than significant.

Mitigation Measures:

None required.

16. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Similar to the findings of the 2015 General Plan EIR, all impacts will be reduced to less-than significant levels. No mitigation measures are necessary.

IV. ENVIRONMENTAL IMPACT ANALYSIS
J.5 PUBLIC SERVICES – LIBRARIES

17. INTRODUCTION

This section of the SEIR analyzes the potential environmental effects related to library services from implementation of the proposed project. Information in this section is based in part on the Sierra Madre Public Library (SMPL) website.[25]

A. 2015 General Plan EIR Analysis and Conclusions

The 2015 General Plan EIR determined that although future development in accordance with the 2015 General Plan Update would introduce new residents, which would increase the service population of the SMPL, does not have a standard measurement of service based on a volumes per capita ratio and because many collection items are now available electronically, the sizes of libraries are not considered adequate measures of service. As such, the 2015 General Plan EIR found that impacts to library services would not be significant.

18. ENVIRONMENTAL SETTING

A. Existing Conditions

The Sierra Madre Public Library, begun in 1887, is the fourth oldest City library in Los Angeles County and the tenth oldest in Southern California. The current 8,762 square-foot library, located at 440 W. Sierra Madre Boulevard, was constructed in 1955 and houses a collection of approximately 47,103 volumes and a historical archives collection. Collections include approximately 39,949 books, 5,545 media resources, 71 periodicals, and 24,741 electronic books. The archives are jointly owned by the Sierra Madre Historical Preservation Society and SMPL. Seven public computers are available for public use as well as free WiFi inside and outside the library

SMPL offers a wide range of library services to adults, teens, and children and the services are expanded through participation in the Southern California Library Cooperative, which consists of a network of 40 independent libraries located in Los Angeles and Ventura counties that have agreed to cooperate in providing library services to the residents of all participating jurisdictions.

SMPL services include include physical materials; online reference resources; online databases; downloadable ebooks and eaudiobooks; local history collections, study spaces, foreign language materials for children in Spanish and Mandarin; and programs, including book clubs, preschool story times, baby rhyme time, summer reading programs for all ages, parent-child workshop series, and many more.

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[25] *City of Sierra Madre, Public Library website, available at: https://www.cityofsierramadre.com/services/library, accessed June 30, 2021.*

1) *Library Needs Assessment*

There are no prescriptive standards set for public libraries by the American Library Association, Public Library Association, or the State of California. Instead, they advocate an outcomes-based assessment process based on the fact that each library serves a different community with different needs. For example, libraries in communities with many young families would need various young adult and children services compared to libraries serving a population with a high percentage of retirees. In order to allow for a potential expansion of the existing library building in the future, the property at 449 Mariposas Avenue was rezoned in 2013 to permit library facilities, and the Children's Room of the SMPL was completed in 2012 to improve the use of the existing space.

The Sierra Madre Public Library's Board of Trustees (Board) follows the City's strategic planning process to assess the needs of the library for new services and facilities. In 2012, a community-wide survey was conducted, which formed the basis for the most recent Strategic Plan completed and adopted by the Board in October 2013 for the years 2014-2017.

2) *Staffing*

SMPL is staffed by 5 full-time and 6-7 part-time employees providing 43 weekly public service hours from Monday through Saturday. Regular staff duties include research and reference, readers advisory, literacy-based programs, community building, training patrons how to find and evaluate information, and technology access. Librarians also support the collection and preservation of the City's historical images and documents.

SMPL also has a number of volunteers that provide support services (e.g., archiving, in-house circulation, and processing) to the library. For the fiscal year 2013-2014, SMPL had 29 volunteers, up from the previous fiscal year of 2012-2013, which was at 16.

3) *Funding*

Funding for the City's library facilities are provided by various means, including the City's General Fund. Based on the City's Annual Budget Report for 2020-2021, proposed General Fund allocations for SMPL for the 2020-2021 fiscal year include $466,300 for personnel and $63,005 for maintenance and operation. The Friends of the Sierra Madre Public Library contribute $55,000 annually to support programs, digital resources and more. Additionally, small remodels and additions projects are usually funded through a combination of donations and the City's General Funds. An additional source of funding for SMPL comes from grants, which vary year to year.

Another source of funding is through the collection of Public Facilities Fees, in accordance with Chapter 15.52 (Public Facilities Fee) of the City's Municipal Code. Pursuant to Chapter 15.52, all new development must pay a Public Facilities Fee to offset the proposed development's potential impact on public facilities demand.[26] Public facilities include services such as water, sewer, parks, police, fire, and library services. Fees are collected at the time of issuance of building permits, as outlined in Section 15.52.050 (Timing of

[26] *For purposes of assessing Public Facilities Fees, new development does not include that which replaces existing development, but applies only to additional residential units or non-residential square footage created by new development.*

Payment). However, per SMPL, due to the minimal development opportunities in the City, the Public Facilities Fee should not be considered a consistently dependable source of future funding.

4) *Housing Element Project Sites*

Site 1

Site 1 includes nine parcels along Mariposa Avenue and Lima Street that are currently developed with single- and multi-family residential uses. Site 1 is located approximately 0.2-mile southeast of SMPL.

Site 2

Site 2 includes ten parcels along Suffolk Avenue and Baldwin Avenue developed with older multi-family development. Site 2 is located approximately 0.6-mile southeast of SMPL.

Site 3

Site 3 includes one parcel along Sierra Madre Boulevard that is currently developed with four older multi-family residential buildings, open space, and parking areas. Site 3 is located less than 0.1-mile northwest of SMPL, across Sierra Madre Boulevard.

Site 4

Site 4 includes one parcel along N. Baldwin Avenue that is currently developed with a single-family residence. Site 4 is located approximately 0.6-mile northeast of SMPL.

Site A

Site A is located on the parking area of St. Rita Catholic Church. Site A is located approximately 0.7-mile northeast of SMPL.

Site B

Site B is located in the parking area of the United Methodist Church. Site B is located approximately 0.3-mile west of SMFD.

Site C

Site C is located on the parking area of the Old North Church. Site C is located approximately 0.3-mile northeast of SMFD.

Site D

Site D is located on asphalt play areas and the parking area of the Bethany Church and School. Site D is located approximately 0.5-mile northeast of SMFD.

B. Regulatory Setting

1) *Local*

City of Sierra Madre Municipal Code

The following provision from the City's Municipal Code focuses on library services impacts associated with new development projects and is relevant to the General Plan Update:

- **Title 15 (Buildings and Construction), Chapter 15.52 (Public Facilities Fee).** Imposes a fee as a condition of issuance of any project permit to mitigate potential impacts of new developments on public facilities.

City of Sierra Madre 2035 General Plan

The following are relevant policies and implementation measures of the Sierra Madre General Plan Update and Implementation Program.

General Plan Policies

Community Services Element

- Policy C13.1: Review the library's telecommunication capabilities and upgrade the facility to accommodate current and future technologies for use by the public and City employees.
- Policy C13.2: Maintain an updated computerized library management system to store library records and inventory.
- Policy C13.3: Evaluate transitioning to new technology for materials security and circulation system, or other self-service systems.
- Policy C13.4: Review and update collection development policies and procedures.
- Policy C14.1: Provide drop-in hours for the public to seek help using new technology, i.e. email, text, instant messaging, electronic devices and eReaders, use of Social Media.
- Policy C14.2: Provide continuing education opportunities for Staff in using digital and reference resources.
- Policy C15.1: Continue to develop the partnership between the library, local schools, and the Sierra Madre Historical Preservation Society.
- Policy C15.2: Identify under-represented groups in the community and target special programs and volunteer opportunities to include them (e.g. young adult, young parents, seniors, etc.)
- Policy C15.3: Maintain and enhance cultural and educational programs.
- Policy C15.4: Continue to improve services to people with special needs, i.e. Titles To Go (homebound delivery service).

- Policy C16.1: Continue to collect, preserve and make accessible materials relevant to the history of Sierra Madre, California.
- Policy C16.2: Facilitate communication between the Sierra Madre Historical Preservation Society and Library Board of Trustees to ensure exhibition and protection of important local history materials.
- Policy C16.3: Assist in the administration and preservation planning for the Sierra Madre Oral History Project and Digital Storyboards.
- Policy C17.1: Encourage the professional and paraprofessional development of staff through webinars, courses and meetings, workshops, seminars, professional committee participation, and extension courses.
- Policy C17.2: Promote the use of Sommer Library Scholarship and Eph Konigsberg Scholarship funds to staff.
- Policy C18.1: Continue to survey the community to assist staff in developing collections.
- Policy C18.2: Update the existing circulation policy to anticipate future needs, address current impact of technology on library use and provide procedures that are beneficial for both library and public.
- Policy C19.1: Promote the library at community gatherings, events and functions.
- Policy C19.2: Develop a new strategy and funding for an addition/remodel, or new facility to address multiple community needs including space for library programs, local history materials, public use of technology and meeting and work areas.
- Policy C19.3: Implement the Sierra Madre Public Library Strategic Plan, and continue to evaluate and update it as necessary to establish facility and service priorities.
- Policy C20.1: Promote the Friends of the Sierra Madre Library's fund raising activities.
- Policy C20.2: Expand the use of community volunteers under the direction of staff; include programs for teens and adults.
- Policy C21.1: Apply to grants and foundations for funds.
- Policy C21.2: Solicit private donations.
- Policy C21.3: Actively pursue Federal, State and local funding opportunities.
- Policy C21.4: Continue working with the Friends of the Sierra Madre Library, Sierra Madre Community Foundation and Sierra Madre Historical Preservation Society other local community philanthropic organizations to secure future funding.

Implementation Program Measures

Library Services Implementation Program

- Measure IM-1: The City shall review and evaluate emerging library technologies, identify funding, prioritize technological projects, and incorporate projects as goals into Library Strategic Plan to ensure implementation. The library shall train staff and community residents in the use of implemented technologies.
- Measure IM-2: The City shall promote library services to the community by continuing relationships with local organizations and clubs, visits to local schools, surveying community residents for service priorities, and providing educational and cultural programs for all ages.
- Measure IM-3: The City shall utilize allocated training funds and local scholarship funds to encourage professional and paraprofessional training.
- Measure IM-4: The City shall continue to evaluate all library collections so that they are accessible, browseable, and relevant to community residents through the use of updated collection policies, circulation policies, and general library operational procedures.
- Measure IM-5: The City shall continue the Memorandum of Understanding agreement with the Sierra Madre Historical Preservation Society (SMHPS), and assign a Library Board of Trustee Liaison to attend monthly SMHPS meetings to report on library and local history matters; library staff will present to SMHPS twice yearly on status of Local History/Archive collection.
- Measure IM-6: The City shall continue to seek supplemental funding opportunities to support library services through local philanthropic groups, grants, and donations.
- Measure IM-7: The City shall continue to provide meaningful volunteer opportunities for residents from teens through adults. Library staff shall engage and train volunteers in duties relating to processing of library materials, docent tours, digitization projects, public programs, marketing, and as library ambassadors to the community.

19. ENVIRONMENTAL IMPACTS AND MITIGATIONS

A. Threshold of Significance

Appendix G of the CEQA Guidelines provides thresholds address impacts related to school services. Specifically, the Guidelines state that the proposed project may have an adverse significant school services impact if it would:

e) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objective for other public facilities.

B. Project Impacts and Mitigation Measures

Impact J-5: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objective for other public facilities?

Impact Analysis:

The 2015 General Plan EIR determined that although future development in accordance with the 2015 General Plan Update would introduce new residents, which would increase the service population of the SMPL, does not have a standard measurement of service based on a volumes per capita ratio and because many collection items are now available electronically, the sizes of libraries are not considered adequate measures of service. In addition, costs for library facilities are funded by the City's General Fund. Increased tax revenue generated from the additional development that would be accommodated under the General Plan Update would add to the City's General Fund, in which SMPL receives annual funding. Cost for library facilities are also funded by the City's Public Facilities Fee placed on all new residential development, pursuant to Chapter 15.52 (Public Facilities Fee) of the City's Municipal Code. Furthermore, the General Plan Update and Implementation Program include policies and measures that would help maintain adequate levels of services and reduce impacts of potential development projects on library services. As such, the 2015 General Plan EIR found that impacts to library services would not be significant.

The project proposes land use designation changes, rezoning, and updates to the General Plan Land Use, Safety, and Circulation Elements. The update to the Land Use Element includes establishing two new multi-family residential land use categories (R-3-20 and R-3-30), creating an Affordable Housing Overlay on select congregational sites, along with minor changes to the Land Use table and map to accommodate residential land uses on the sites identified to meet the RHNA allocation. The update to the Safety Element includes policies related to limiting risk from wildfire, including avoiding development in Very High Fire Hazard Severity Zones (VHFHSZ) updating maps related to fire hazards, and developing a Vegetation Management Program. The update to the Circulation Element includes minor updates to the existing setting and a policy update related to the City's adoption of VMT thresholds.

Changes in land use designations, rezoning, and updates to the Land Use Element would allow for an increase in residential service population for SMFD. However, as detailed in **Section V.I, Population and Housing**, of this Draft SEIR, additional growth that would be supported by the project would not be substantial. Specifically, a maximum increase of 211 residential units and 483 residents could occur within the City. In addition, as with development that could occur under the 2015 General Plan Update, development that could occur under the project would individual development projects that would occur under the project would continue to be subject to the Public Facilities Fee placed on all new residential development. As stated in Section 15.52.070 (Special Fund) of the City's Municipal Code, fees go into a special fund, entitled the "public facilities fee fund," which are to be expended only on the installation, acquisition, construction, and improvement of eligible facilities, including libraries. Through the City's regular budgeting efforts, SMPL's resource needs, including staffing, collections, services/programs, and possibly library expansions would be identified and allocated according to the priorities at the time. Should additional needs arise from potential future development supported by the project, costs would continue to be offset through additional tax revenue generated by the individual developments through the City's General Fund. Furthermore, the General Plan, including the Land Use Element, contains policies and implementation measures designed to reduce potential impacts related to library services.

Updates to the Safety Element would serve to reduce the City's risks from wildfire and would not have the potential to impact library services within the City.

Updates to the Circulation Element are primarily ministerial and pertain to the City's approach for analyzing transportation-related environmental impacts and would not have the potential to impact library services within the City.

Based on the above, no new significant impacts to library services would occur as a result of the project and, as with the 2015 General Plan Update, impacts would be less than significant.

Mitigation Measures:

None required.

20. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Similar to the findings of the 2015 General Plan EIR, all impacts will be reduced to less-than significant levels. No mitigation measures are necessary.

IV. ENVIRONMENTAL IMPACT ANALYSIS
K. TRANSPORTATION

1. INTRODUCTION

This section of the EIR analyzes the project's effects related to transportation. The analysis is based on *Transportation Impact Study for the City of Sierra Madre General Plan Update* (Traffic Study) prepared by Gibson Transportation Consultants, August 2021. A copy of this report is provided in Appendix E of this EIR.

A. 2015 General Plan EIR Analysis and Conclusions

The 2015 General Plan EIR found that one intersection would operate at a deficient LOS (LOS F) with the addition of trips from buildout of the General Plan Update. Specifically, the Orange Grove Avenue/Baldwin Avenue intersection is projected to operate at LOS F during the AM and PM peak commute hours under the Year 2035 With Project traffic conditions. With implementation of the restriping, this intersection would operate at and acceptable LOS (LOS E); thereby, mitigating the impact. The 2015 General Plan EIR found that buildout would add less than 50 trips to this intersection; therefore, no analysis of CMP roadway segments or intersections is required, as no impacts would occur. Buildout in accordance with the General Plan Update would not result in changes to the City's circulation network, nor would it increase hazards or impact emergency access due to design features. Lastly, the 2015 General Plan EIR found that various elements of the General Plan Update outline policies that support non-automotive modes of transportation including bicycling, walking, and public transit and impacts to adopted policies, plans, and programs for alternative transportation are not anticipated to occur.

2. ENVIRONMENTAL SETTING

A. Existing Setting

i) Existing Roadway Network

The following describes the major roadway facilities in Sierra Madre and vicinity.

- Interstate 210 (I-210) is an east-west travelling freeway servicing the San Gabriel Valley. The western terminus lies at the interchange with I-5 in the San Fernando Valley, and the eastern terminus lies in San Bernardino County at the interchange with I-10. This freeway is a major regional route connecting the foothill communities to the coast and Inland Empire. The roadway features six to eight lanes, including a high occupancy vehicle lane, and has a posted speed limit of 65 miles per hour (mph) throughout the valley. I-210 runs through the City of Arcadia, one half-mile to the south of the Sierra Madre border, providing access primarily via interchanges at Santa Anita Avenue, Baldwin Avenue, and Michillinda Avenue, all of which enter the City at some point in their alignment. I-210 is the gateway connector to the regional freeway network for the residents of Sierra Madre, and is therefore of key importance to the City.

- Michillinda Avenue is the only street in the City classified as a Major Road, traveling north-south and serving as the boundary between Sierra Madre and Pasadena to the west. It is one of the primary roads connecting the City to I-210, and is thus a key part of the regional road network for Sierra Madre. The northern portion of the road terminates in a residential neighborhood against

the foothills, while the southern terminus is located in Arcadia at the intersection with Huntington Drive, a major arterial running through the San Gabriel Valley. Within Sierra Madre, the street maintains a two-lane, undivided configuration with a posted speed limit of 35 mph. The character of the roadway is primarily residential within the City, providing access to single-family homes on both the Sierra Madre and Pasadena sides of the border. There is some commercial development accessible by Michillinda Avenue on the Pasadena side near the intersection with Sierra Madre Boulevard.

- Sierra Madre Boulevard serves as the primary east-west Collector within the City and connects Sierra Madre to Pasadena to the west and Arcadia to the east. The street curves south in Pasadena and continues to San Marino, between I-210 and I-10. Within Sierra Madre the street maintains an undivided, two-lane configuration and a posted speed limit of 25 to 30 mph.

- Baldwin Avenue is classified as a Collector within the city, traveling north-south and connecting Sierra Madre to I-210. Baldwin Avenue serves as the central north-south street within the City, forming the downtown core along with Sierra Madre Boulevard. Having an interchange with I-210 makes Baldwin Avenue a key part of the regional road network for the City. Within the City the road maintains a two-lane, undivided configuration and a posted speed limit of 25 to 35 mph.

- Grandview Avenue is classified as a Local Collector within the City, providing an east-west passage in the northern part of Sierra Madre. The main circulatory function of this street is directing traffic from the foothill communities to Santa Anita Avenue, Baldwin Avenue, and Michillinda Avenue so they may connect to the rest of the City and I-210. The roadway maintains and undivided, two-lane section within the City and a posted speed limit of 30 mph. Grandview Avenue terminates on the west side at Michillinda Avenue and on the east side past Santa Anita Avenue in Arcadia. Between Camillo Road and Santa Anita Avenue, Grandview Avenue serves as a border between Sierra Madre and Arcadia. Within the City the roadway is lined with single-family homes.

- Orange Grove Avenue is classified as a Local Collector within the City and provides an east-west corridor at the City's southern limit. For the entire length of Orange Grove Avenue within Sierra Madre it serves as the southern border with Arcadia. On the western side of the City the street terminates at Michillinda Avenue. However, the street resumes again in Pasadena, serving as a larger collector. Orange Grove Avenue terminates on the east side at Santa Anita Avenue in Arcadia. Throughout Sierra Madre the street maintains a two-lane, undivided configuration and a 35 mph posted speed limit. The character of Orange Grove Avenue within the city limits is residential, with single-family homes lining both sides of the street for the majority of the street.

- Lima Street and Mountain Trail Avenue are classified as Local Collectors within Sierra Madre. They are both north-south running streets that run the entire length of the City from the southern limit at Orange Grove Avenue to their end points in the foothill communities. They are both two-lane, undivided roadways with a posted speed limit of 30mph, and they both primarily feature single family homes.

ii) Existing Transportation System

1) Transit

Public transportation in the City include Access Services, the City's Dial-A-Ride Service, the Gateway Coach, the Metro Gold Line, and the MTA Bus Line. The Los Angeles Metropolitan Transit Authority (Metro) operates two transit routes in Sierra Madre:

- Metro Line 487 is an express line connecting Downtown Los Angeles to the cities of San Gabriel, Sierra Madre, and El Monte. Within Sierra Madre the line runs down Sierra Madre Boulevard, with stops every few blocks. Headways are approximately 20 minutes during the weekday peak periods. This line also stops at the Metro Gold Line train station in Pasadena, providing another method of connectivity to Los Angeles.
- Metro Line 268 runs through the western portion of the San Gabriel Valley, connecting the cities of Altadena, Pasadena, Sierra Madre, Arcadia, and El Monte. Within Sierra Madre the line runs along Sierra Madre Boulevard from Michillinda Avenue to Baldwin Avenue, and along Baldwin Avenue from Sierra Madre Boulevard south to Orange Grove Avenue where it crosses into Arcadia. This line operates on 30-minute headways during the weekday peak periods.

2) Bicycle and Pedestrian Network

There are currently no defined bicycle facilities within the City of Sierra Madre; the city facilities are limited to bike racks, but no bicycle lanes. The bike racks are located in Memorial Park (bandshell), Sierra Vista Park (pool/recreation center), 100 W. Sierra Madre Boulevard, Kersting Court, and East Montecito public parking lot (corner of East Montecito and N. Baldwin Avenue). The streets within the city are generally wide, with enough cross-sectional space to accommodate individual bicyclists even when parking is provided; this is particularly true for the Local Collectors and Local Streets. However, the streets within the city are not wide enough to accommodate large groups of bicyclists, which typically use Sierra Madre and Orange Grove Avenue on the weekends.

The City's Public Works Department prepared a Sidewalk Master Plan in January 2015, which implements goals and policies of the General Plan Update. Per the Sidewalk Master Plan, sidewalks are not continuous throughout the City and many are in need of repairs or replacement. There are locations where there are sidewalks present on both sides of the roadway; areas with sidewalks on only one side; areas with discontinuous sidewalks are provided; areas with sidewalks that are damaged and in need of repair or replacement; areas where sidewalks that are not wide enough to accommodate all uses; and others with no sidewalks at all.

3) Housing Element Project Sites

The General Plan Update includes zoning revisions to ten sites in the City that will allow for denser housing developments so the City can meet their Regional Housing Needs Allocation (RHNA) goals of 204 additional dwelling units provided throughout the City. Two of the sites included in this study have already been approved (Stonegate) or are currently under the approval process (Meadows), but they have been included to provide the most complete analysis possible.

The ten sites being updated in the General Plan and included in this analysis are spread throughout the City.

Site 1

Site 1 consists of nine contiguous parcels located at the northeast corner of South Lima Street & Mariposa Avenue.

Site 2

Site 2 also consists of nine contiguous parcels but is located at southeast corner of South Baldwin Avenue & Suffolk Avenue.

Site 3

Site 3 is only one parcel located at 491 West Sierra Madre Boulevard.

Site 4

Site 4 consist of one parcel located at 2215 North Baldwin Avenue.

Site A

Site A is St. Rita Catholic Church & School consisting of four parcels at the northeast corner of North Baldwin Avenue & West Grand View Avenue.

Site B

Site B is United Methodist Church located at 695 West Sierra Madre Boulevard.

Site C

Site C is Old North Church consisting of five parcels at the northeast corner of South Hermosa Avenue & West Sierra Madre Boulevard.

Site D

Site D is Bethany Church & School consisting of nine parcels located between South Baldwin Avenue, Auburn Avenue, Highland Avenue, and Montecito Avenue.

Stonegate Site

The Stonegate site is also known as the One Carter property.

The Meadows Site

The Meadows site is located on the Mater Dolorosa property.

B. Regulatory Framework

i) Federal

1) American with Disabilities Act (ADA)

Titles I, II, III, and V of the ADA have been codified in Title 42 of the United States Code, beginning at Section 12101. Title III prohibits discrimination on the basis of disability in “places of public accommodation” (businesses and non-profit agencies that serve the public) and “commercial facilities” (other businesses). The regulation includes Appendix A to Part 36 (Standards for Accessible Design)

establishing minimum standards for ensuring accessibility when designing and constructing a new facility or altering an existing facility.

Examples of key guidelines include detectable warnings for pedestrians entering traffic where there is no curb, a clear zone of 48 inches for the pedestrian travel way, and a vibration-free zone for pedestrians.

ii) State

1) Statewide Transportation Improvement Plan

The California Transportation Commission (CTC) administers transportation programming. Transportation programming is the public decision-making process, that sets priorities and funds projects envisioned in long-range transportation plans. It commits expected revenues over a multi-year period to transportation projects. The State Transportation Improvement Program (STIP) is a multi-year capital improvement program of transportation projects on and off the State Highway System funded with revenues from the State Highway Account and other funding sources. The California Department of Transportation (Caltrans) manages the operation of State Highways, including the freeways passing through the Los Angeles region.

AB 32 and SB 375

With the passage of Assembly Bill (AB) 32, the Global Warming Solutions Act of 2006, the State of California committed itself to reducing statewide greenhouse gas (GHG) emissions to 1990 levels by 2020. The California Air Resources Board (CARB) is coordinating the response to comply with AB 32. The proposed LUCE pro-actively incorporates strategies for integrated land use and transportation planning that achieve per capital GHG reduction, per capita VMT reduction and trip reduction that would further the City's efforts to meet the state-wide policy intent of this legislation.

In 2007, CARB adopted a list of early action programs that could be put in place by January 1, 2010. In 2008, VRB defined its 1990 baseline level of emissions, and by 2011 it will complete its major rule making for reducing GHG emissions. Rules on emissions, as well as market-based mechanisms like the proposed cap and trade program, took effect January 1, 2012.

On December 11, 2008, California ARB adopted its Proposed Scoping Plan for AB 32. This scoping plan included the approval of Senate Bill (SB) 375 as the means for achieving regional transportation-related GHG targets. SB 375 provides guidance on how curbing emissions from cars and light trucks can help the state comply with AB 32.

There are five major components to SB 375. First, SB 375 will address regional GHG emissions targets. California ARB's Regional Targets Advisory Committee will guide the adoption of targets to be met by 2020 and 2035 for each Metropolitan Planning Organization (MPO) in the state. These targets, which MPOs may propose themselves, will be updated every 8 years in conjunction with the revision schedule of housing and transportation elements.

Second, MPOs will be required to create a Sustainable Communities Strategy (SCS) that provides a plan for meeting regional targets. The SCS and the Regional Transportation Plan (RTP) must be consistent with each other, including action items and financing decisions. If the SCS does not meet the regional target, the MPO must produce an Alternative Planning Strategy that details an alternative plan to meet the target.

Third, SB 375 requires that regional housing elements and transportation plans be synchronized on 8-year schedules. In addition, Regional Housing Needs Assessment (RHNA) allocation numbers must conform to

the SCS. If local jurisdictions are required to rezone land as a result of changes in the housing element, rezoning must take place within 3 years.

Fourth, SB 375 provides CEQA streamlining incentives for preferred development types. Certain residential or mixed-use projects qualify if they conform to the SCS. Transit-oriented developments (TODs) also qualify if they (1) are at least 50 percent residential, (2) meet density requirements, and (3) are within 0.5 mile of a transit stop. The degree of CEQA streamlining is based on the degree of compliance with these development preferences.

Finally, MPOs must use transportation and air emissions modeling techniques consistent with guidelines prepared by the CTC. Regional Transportation Planning Agencies, cities, and counties are encouraged, but not required, to use travel demand models consistent with the CTC guidelines.

Senate Bill (SB) 743

To further the state's commitment to the goals of SB 375, AB 32, and AB 1358, Governor Brown signed SB 743 on September 27, 2013. SB 743 adds Chapter 2.7, Modernization of Transportation Analysis for Transit-Oriented Infill Projects, to Division 13 (Section 21099) of the Public Resources Code. Downtown Santa Monica qualifies as a Transit Priority Area (TPA), and therefore key provisions of SB 743, including reforming aesthetics and parking CEQA analyses for urban infill projects and eliminating the measurement of automobile delay, or LOS, as a metric that can be used for measuring traffic impacts in TPAs would apply to the project site. Under SB 743, the focus of transportation analysis will shift from driver delay to reduction of GHG emissions, creation of multimodal networks, and promotion of a mix of land uses.

Specifically, SB 743 requires the OPR to amend the CEQA Guidelines (Title 14 of the California Code of Regulations sections and following) to provide an alternative metric to LOS for evaluating transportation impacts. Once the CEQA Guidelines are amended to include those alternative criteria, auto delay (as measured by LOS) will no longer be considered a significant impact under CEQA. Particularly for areas served by transit (TPAs) such as the City of Santa Monica, those alternative criteria must "promote the reduction of GHG emissions, the development of multimodal transportation networks, and a diversity of land uses." (New Public Resources Code Section 21099(b)(1).) Measurements of transportation impacts may include "vehicle miles traveled, vehicle miles traveled per capita, automobile trip generation rates, or automobile trips generated." (Ibid.) OPR also has discretion to develop alternative criteria for areas that are not served by transit, if appropriate. (Id. at subd. (c).)

Pursuant to SB743, OPR released the draft revised *CEQA Guidelines* in November 2017, recommending the use of vehicles miles traveled (VMT) for analyzing transportation impacts. Additionally, OPR released *Updates to Technical Advisory on Evaluating Transportation Impacts in CEQA*, to provide guidance on VMT analysis. In this Technical Advisory, OPR provides its recommendations to assist lead agencies in screening out projects from VMT analysis and selecting a significance threshold that may be appropriate for their particular projects. While OPR's Technical Advisory is not binding on public agencies, CEQA allows lead agencies to "consider thresholds of significance . . . recommended by other public agencies, provided the decision to adopt those thresholds is supported by substantial evidence." (CEQA Guidelines, § 15064.7, subd. (c).)

iii) Regional

1) Southern California Associations of Governments 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy

On April 2016, the Southern California Association of Governments (SCAG) adopted the 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). The 2016 RTP/SCS presents a long-term vision for the region's transportation system through the year 2040 and identifies mobility, accessibility, sustainability, and high quality of life as the principals most critical to the future of the region. Furthermore, it balances the region's future mobility and housing needs with economic, environmental, and public health goals. As stated in the 2016-2040 RTP/SCS, SB 375 requires SCAG and other Metropolitan Planning Organizations (MPO) throughout the State to develop a Sustainable Communities Strategy to reduce per capita greenhouse gas (GHG) emissions through integrated transportation, land use, housing, and environmental planning.[1] Within the 2016-2040 RTP/SCS, the overarching strategy includes plans or High Quality Transit Areas (HQTA), Livable Corridors, and Neighborhood Mobility Areas as key features of a thoughtfully planned, maturing region in which people benefit from increased mobility, more active lifestyles, increased economic opportunity, and an overall higher quality of life. HQTAs are described as generally walkable transit villages or corridors that are within 0.5 mile of a well-serviced transit stop or a transit corridor with 15-minute or less service frequency during peak commute hours.[2] Local jurisdictions are encouraged to focus housing and employment growth within HQTAs.[3] The project site is located within an HQTA as designated by the 2016–2040 RTP/SCS.[4,5] Please refer to Section IV.H, Land Use/Planning, for a detailed discussion of the applicable provisions of the 2016–2040 RTP/SCS that apply to the project. As demonstrated therein, the project would be consistent with applicable goals and principles set forth in the 2016–2040 RTP/SCS.

iv) Local

2) City of Sierra Madre 2015 General Plan

The following are relevant policies and implementation measures of the Sierra Madre General Plan and Implementation Program.

General Plan Policies

Land Use Element

- Policy L5.1: Prohibit the use of cul-de-sacs and require through streets in new subdivisions except when no other access is physically feasible due to property ownership, parcel location or other physical factors.

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[1] *SCAG, 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy, April 2016, p. 166.*

[2] *SCAG, 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy, April 2016, p. 189.*

[3] *SCAG, 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy, April 2016, p. 76.*

[4] *SCAG, 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy, April 2016, Exhibit 5.1: High Quality Transit Areas in the SCAG Region for 2040 Plan, p. 77.*

[5] *Metro, High Quality Transit Areas – Southeast Quadrant, Map.*

- Policy L34.3: Identify opportunities to improve pedestrian access from public parking areas to commercial uses, particularly the access from the parking lot on Mariposa Avenue to the commercial uses on the south side of Sierra Madre Boulevard.
- Policy L49.2: Provide enhanced paving for all pedestrian crosswalks on Sierra Madre Boulevard and Baldwin Avenue within the downtown district, and consider installation of the same on East Montecito Avenue.
- Policy L49.7: Improve pedestrian connections between the street and the public parking lots through signage, coordination with property owners, purchase of properties and other mechanisms.
- Policy L51.1: Maintain the existing street classification system.

  Policy L51.3: Maintain existing facilities for bicyclists, pedestrians, and transit users.
- Policy L51.4: Explore the development of new facilities for bicyclists, pedestrians and transit users.
- Policy L51.5: Encourage and support the use of non-automotive travel throughout the City.

  Policy L51.6: Encourage City staff, employees, residents and visitors to walk and bicycle as often as possible.
- Policy L51.7: Utilize non-automotive transportation solutions as a tool to further goals related to environmental sustainability and economic development.
- Policy L51.8: Prioritize improvements for non-vehicular modes like bicycles, pedestrians, and transit to eliminate the need for new or expanded roadways and intersection improvements like traffic signals.
- Policy L52.1: Ensure that all pedestrians, particularly seniors and the disabled, are able to travel safely and easily throughout the City.
- Policy L52.2: Prioritize opportunities to implement traffic calming techniques and limit new driveway curb cuts along roadways, such as Sierra Madre Boulevard and East Montecito.
- Policy L52.3: Provide safe travel routes for bicyclists including designated bicycle lanes on streets where these facilities can be accommodated.
- Policy L52.4: Evaluate the impact of any capital improvement project on the travel needs of bicycles, pedestrians, and vehicle users.
- Policy L52.5: Install and maintain mirrors on blind streets in the canyon.
- Policy L52.6: Improve pedestrian crossing opportunities work to increase pedestrian safety, and eliminate painted crosswalks where they provide a false sense of security, and make a more concerted effort to enforce laws related to pedestrian safety.
- Policy L52.7: Create and implement a City bikeway plan.

- Policy L52.8: Require the incorporation of bicycle facilities into the design of land use plans and capital improvements, including bicycle parking within new multi-family and non-residential sites or publicly accessible bicycle parking.
- Policy L52.9: Explore the possibility of sidewalk continuity where feasible.

Policy L53.1: Develop a comprehensive Citywide approach to residential street traffic calming.

- Policy L53.2: Coordinate with law enforcement agencies to ensure adequate enforcement of speed limits along streets, including local collector and local streets.
- Policy L53.3: Maintain and enforce speed limits which address the residential nature of local collector and local streets.
- Policy L53.4: Install and maintain traffic calming measures where appropriate.
- Policy L56.1: Make streets handicap-accessible with more ramps and curb cuts.
- Policy L56.2: Promote usage of the Dial-A-Ride paratransit service.

Policy L56.3: Ensure that all streets are accessible to all persons including those with mobility challenges

Resource Management Element

Policy R23.1: Establish a transportation system management program to encourage the use of transit, carpooling, shuttles and other transportation options to reduce vehicle miles traveled and vehicle trips.

- Policy R23.6: Provide and enhance local transit service to reduce personal vehicle trips.
- Policy R23.7: Maintain links to the MTA Gold Line light rail system.
- Policy R23.8: Pursue funding sources for facilities and programs linked to regional transit.

Community Services Element

- Policy C12.1: Explore the feasibility of a bicycle lane throughout the City for recreational and transportation usage.
- Policy C26.1: Explore other transit funding sources.
- Policy C26.2: Develop inter-jurisdictional coordination of the transportation program with Arcadia and/or Pasadena, thereby sharing the cost of the program.
- Policy C26.3: Ensure that the service providers continue to provide the most effective service by monitoring complaints and responses, and evaluating ridership both monthly and annually.
- Policy C26.4: Continue to provide the free fixed route services for the community.
- Policy C26.5: Continue to coordinate discounted transit services for seniors, handicapped individuals, or low- income residents.

Policy C27.1: Continue to provide comprehensive information to the transit user that is informative, accessible, and easy to understand.

- Policy C28.1: Continue to work with the Los Angeles County Metropolitan Transit Authority (Metro) to maintain the existing bus routes linking the City to the Gold Line train station in Pasadena and Arcadia.
- Policy C29.3: Explore the feasibility of creating a Park-and-Ride lot for resident commuters.

Policy C30.1: Ensure the enforcement of speed laws and continue to monitor the City's busy intersections.

- Policy C30.2: Continue to evaluate measures, such as speed bumps, that reduce speeding.
- Policy C30.3: Maintain safety and efficient circulation without impacting the village atmosphere.
- Policy C30.6: Offer bicycle safety and traffic courses for the community sponsored by the Police and Community Services Departments.

<u>Implementation Plan Actions</u>

Circulation Implementation Program

- Measure IM-1: The City shall continue to use the street classification system, including Major, Collector, Local Collector and Local streets.
- Measure IM-2: When reviewing proposed subdivisions, the City shall limit the development of new roadways to the minimum required to provide access to properties. The City shall also limit expansion of existing roadways when considering traffic volumes for future development.

Measure IM-3: The City shall continue to set aside sufficient budget to maintain facilities for bicyclists (such as signage and pavement marking), pedestrians and transit users. The City shall also consider whether additional funds are available to develop new facilities.

- Measure IM-4: The City shall prepare and implement a Citywide Sidewalk Master Plan, to include sidewalk maintenance and prioritization of sidewalk infill projects.
- Measure IM-5: The City shall analyze opportunities to provide bicycle facilities in the city and include them in the new bikeway plan where appropriate.

Measure IM-6: The City shall update the City's Traffic calming guidelines and provide Sierra Madre-specific criteria for the use of traffic calming devices.

Measure IM-7: The City shall update the City's ADA Plan.

- Measure IM-8: The City shall review Municipal Code Sections relating to parking, crosswalks, and pedestrian safety and amend as necessary.
- Measure IM-9: The City shall publicize and encourage the use of public transportation programs, such as light rail, bus and paratransit services.

Air Quality Implementation Program

Measure IM-6: The City shall create a transportation brochure to provide the public with multiple options for reducing miles traveled and vehicle trips.

- Measure IM-9: The City shall continue to provide the fixed route local transportation services and provide increase social media marketing for greater public awareness.

  Measure IM-10: The City shall continue to partner with MTA and attend quarterly meetings to ensure access to the Gold Line light rail system.

- Measure IM-11: The City shall partner with regional transit providers to identify funding sources to expand transportation programs.

Transit Services Implementation Program

- Measure IM-1: The City will partner with local municipalities to explore additional transit funding sources.

  Measure IM-2: The City will establish a committee to explore the feasibility of partnering with the Cities of Arcadia and Pasadena to develop regional transit service to decrease costs.

- Measure IM-3: The City will continue to present complaints and suggestions for service improvements to the Community Services Commission.

- Measure IM-4: The City will maintain contractual agreements with the transit provider to continue to provide the fixed route service at no cost to users.

- Measure IM-5: Continue to offer discounted Metro Senior Passes provided by the Senior Community Commission donation account and offer free fixed-transit service to all users.

- Measure IM-6: The City will continue to attend Metro meetings to maintain services within Sierra Madre and access to the Goldline Station.

- Measure IM-7: The City will create a signage program to provide adequate directional signage to alert customers and residents of parking available behind stores on Sierra Madre Blvd.

- Measure IM-8: The City will consider the availability of City parking lots to determine whether a Park-and-Ride lot is feasible.

- Measure IM-9: The City will continue to enforce traffic laws, including monitoring of busy intersections, to maintain safety and efficient circulation without impacting the village atmosphere. The City will also consider the feasibility of utilizing measures to reduce traffic speed.

- Measure IM-10: The City will evaluate the feasibility of providing additional disabled parking for the Hart Park House and downtown business district.

  Measure IM-11: The City will provide biannual traffic control safety training for citizens at Town Hall meetings.

- Measure IM-12: The City will develop a new program that teaches bicycle safety.

3. ENVIRONMENTAL IMPACTS AND MITIGATIONS

A. Thresholds of Significance

Appendix G of CEQA Guidelines has been revised to address analysis of impacts associated with the results of a vehicle miles traveled (VMT) analysis compliant with State requirements under State of California Senate Bill 743 (Steinberg, 2013) (SB 743). Specifically, the Guidelines state that a project may have a significant impact on transportation if the project would:

a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities;

b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b);

c) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or

d) Result in inadequate emergency access.

B. Project Impacts and Mitigation Measures

Impact K-1: Would the project conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Impact Analysis:

Per the CEQA Guidelines, a project that generally conforms with and does not obstruct the City development policies and standards will generally be considered to be consistent with and not in conflict with City plans, programs, ordinances, or policies. As discussed below, the project is consistent with and does not conflict with the City plans, policies, programs, ordinances, and standards; therefore, the project would not result in a significant impact. Detailed discussion of the plans, programs, ordinances, or policies related to the proposed residential land use changes is provided below.

General Plan – Land Use Element

The Land Use Element of the General Plan for the City of Sierra Madre provides for the following three goals that define the City transportation policies in relation to land uses:

1. A balanced transportation system which accommodates all modes of travel including automobiles, pedestrians, bicycles, and transit users.

2. Safe and well-maintained streets.

3. Preservation of quiet neighborhoods with limited thru traffic.

The sites proposed for development as part of the General Plan Update would be constructed on existing parcels and not require widened or narrowed streets or reductions in the current pedestrian and bike facilities provided. The design of each site would not preclude the installation of sidewalk enhancements to further improve the pedestrian experience along the perimeter of each opportunity site. The sidewalks can be constructed, upgraded, or maintained within the existing public ROW.

Thus, the project would be consistent with the goals of the Land Use Element of the General Plan.

General Plan – Community Services Element

The Community Services Element of the General Plan for the City of Sierra Madre provides for the following goal that defines the City transportation policies in relation to community services:

1. A quality transportation service available to a wide demographic in the community.

The opportunity sites proposed for development as part of the General Plan Update would not preclude the installation of any transit systems or supportive facilities. Further, the potential population increase associated with the increase in housing may make additional or more frequent transit services more viable without the likelihood that the system capacity would be overwhelmed.

Likewise, the proposed residential development would not preclude the further maintenance and development of the pedestrian and bicycle systems in the City, nor would the amount of new development exceed the capacity of the existing/proposed systems.

Thus, the project would be consistent with the goals of the Community Services Element of the Genera Plan.

Sidewalk Master Plan

The City is currently developing a sidewalk master plan, but it has not been released or adopted yet. As each opportunity site has yet to be designed and the sidewalk master plan is not yet available for review, it not possible to completely evaluate the new land uses' effects on this plan. However, each site, at the time of future development, would be designed to provide an internal pedestrian circulation system that connects with the City's sidewalk system and replaces any missing sidewalks adjacent to the sites. In this way, the development of the sites would support any sidewalk master plan that is developed.

Thus, the project would be consistent with the goals of a future sidewalk master plan.

Sierra Madre Municipal Code (SMMC) Section 17.28.100

SMMC Section 17.28.100 details the vehicle parking requirements for medium/high density residential developments. Each site will be required to provide the required amount of parking, thus, each opportunity site would be consistent with SMMC.

The General Plan Update is consistent with the City plans and policies listed above; therefore, it would not result in a significant impact under the Conflicting with Plans, Programs, Ordinances, or Policies Analysis.

In addition to potential specific impacts of the residential development included in the General Plan Update, the CEQA Guidelines require that all projects be reviewed in combination with nearby Related Projects to determine if there may be a cumulatively significant impact resulting from inconsistency with a particular program, plan, policy, or ordinance. The General Plan Update, along with Related Projects within the Study Area, would not result in a cumulative impact that would preclude the City from serving the transportation needs as defined in its adopted programs, plans, ordinances, or policies.

Each related project considered for development in the City would be separately reviewed and approved by the City, including a check for their consistency with applicable policies. Therefore, the General Plan Update, together with any related project, would not create inconsistencies nor result in cumulative impacts with respect to the identified programs, plans, policies, and ordinances.

Mitigation Measures:

None Required.

Impact K-2: Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Impact Analysis:

SB 743 required the Governor's Office of Planning and Research to change the CEQA Guidelines regarding the analysis of transportation impacts. Under SB 743, the focus of transportation analysis shifted from vehicular delay (level of service [LOS]) to VMT, with the intent of reducing greenhouse gas emissions (GHG), creating multimodal networks, and promoting mixed-use developments.

SB 743, made effective in January 2014 and required to be adopted by every California jurisdiction by July 1, 2020, required the Governor's Office of Planning and Research to change the CEQA guidelines regarding the analysis of transportation impacts. Under SB 743, the focus of transportation analysis shifted from driver delay [LOS] to VMT. The goals of this change were to reduce greenhouse gas emissions, create multimodal networks, and promote mixed-use developments.

The City Council approved a set of VMT significance criteria on June 9, 2020. As this is a General Plan update, the most appropriate analysis for this study is to analyze each opportunity site as a Land Use Plan using the following impact criteria:

1. Project Impact: A significant impact would occur if the VMT rate for the plan would exceed a level of 15% below the applicable baseline VMT rate.
2. Cumulative Project Effect: A significant impact would occur if the project increased total regional VMT compared to cumulative no project conditions.

The VMT analysis presented below was conducted for the project in accordance with the City VMT Thresholds using the San Gabriel Valley Coalition of Governments (SGVCOG) VMT Evaluation Tool, which satisfies State analyses requirements under State of California Senate Bill No. 743 (Steinberg, 2013).

VMT Methodology

The vehicle trips and VMT were calculated based on the SGVCOG VMT Evaluation Tool (VMT Calculator) methodology, as detailed in SGVCOG VMT Tool: Quick Start Guide[6] (VMT User Guide). As described in the VMT User Guide, the VMT Calculator was developed to "estimate project-generated VMT for certain types of land use projects in the San Gabriel Valley and calculate VMT reductions associated with certain VMT-reducing measures." The four primary land uses incorporated into the VMT Calculator are residential, office, industrial, and commercial uses. For each land use, the VMT Calculator generates Home-Based VMT per capita and Home-Based VMT per worker for developments within the San Gabriel Valley, which are based on the following types of one-way trips:

- Home-Based Work Production: trips to a workplace destination originating from a residential use to the Project Site

[6] *SGVCOG, SGVCOG VMT Tool: Quick Start Guide, August 2020*

- Home-Based Other Production: trips to a non-workplace destination (e.g., retail, restaurant, etc.) originating from a residential use
- Home-Based Work Attraction: trips to a workplace destination at the Project Site originating from a residential use

As detailed in the VMT User Guide, the Total VMT per Service Population threshold applies to all trips.

The Total VMT per Service Population target for the various Sites is 15% below the Baseline Area average of 35.46 vehicles miles traveled per service population, or 30.14.

Neighborhood Place Types (NPT)

The SGVCOG developed NPT categories to determine the magnitude of VMT and vehicle trip reductions that could be achieved through Transportation Demand Management (TDM) strategies. As detailed in SGVCOG VMT Reduction Calculations (Fehr & Peers, August 2020), the development of the NPT considered the population density, land use, and general accessibility and access to transit of each census tract in the San Gabriel Valley. The NPTs are categorized as follows:

1. Central City Urban: Very high density, excellent accessibility, high public transit access, low single-family homes, older high-value housing stock
2. Urban High Transit Use: High density, good accessibility, high public transit access, low single-family homes, middle-aged and older housing stock
3. Urban Low Transit Use: Good accessibility, low vacancy, middle-aged housing stock
4. Suburb with Multifamily Housing: Average on most indicators, low single-family homes, and relatively lower housing values
5. Suburb with Single-Family Homes: Low density and accessibility, low vacancy, high newer single-family homes, and relatively higher housing values
6. Rural in Urbanized Area: Slightly better accessibility than the truly “rural” tracts, more likely to have multifamily housing
7. Rural: Very low access, high vacancy, high newer single-family homes with lower housing values (mainly outside population centers of any kind)

The VMT Calculator determines a project’s NPT based on the project parcel address. Sites 1-4 and B-D are considered in an NPT 1 area while Site A is in NPT 5.

Trip Lengths

The VMT Calculator determines a project’s VMT based on trip length information from the Southern California Association of Governments (SCAG) Regional Transportation Plan travel demand forecasting model (RTP Model). The RTP Model considers the TAZs within a certain distance from the Project to determine the trip lengths and trip types that factor into the calculation of the Project’s VMT.

Population and Employment Assumptions

As previously stated, the VMT thresholds are based on Total VMT per Service Population. Thus, the VMT Calculator contains population assumptions developed based on census data for the City and employment

assumptions derived from multiple data sources, including the California Household Travel Survey, RTP Model, and the SCAG transportation analysis model.

VMT Reduction Strategies

Additionally, the VMT Calculator measures the reduction in VMT resulting from a project's incorporation of VMT reduction strategies as project design features or mitigation measures. The following four tiers of VMT reduction strategies are included in the VMT Calculator:

1. Project Characteristics
2. Multimodal Infrastructure
3. Parking
4. TDM Programs

VMT reduction strategies within each of these categories have been empirically demonstrated to reduce trip-making or mode choice in such a way as to reduce VMT, as documented in Quantifying Greenhouse Gas Mitigation Measures[7].

PROJECT VMT ANALYSIS

The VMT Calculator was used to evaluate each opportunity site's VMT for comparison to the VMT impact criteria. The VMT Calculator utilized each opportunity site's land uses and its respective size as the primary input, including the maximum allowable dwelling units.

The VMT analysis results based on the VMT Calculator are summarized in Table IV.K-1. Detailed output from the VMT Calculator is provided in Appendix E, Transportation.

Table IV.K-1:
VMT Analysis Summary

Site	VMT Analysis	Without Project	With Project & Tier 1-3 Reductions [c]	With Project & All VMT Reductions [c]
	Home-Based Work VMT per Worker	33.80	32.23	29.97
1	Impact Threshold	30.14	30.14	30.14
	Significant Impact	**YES**	**YES**	NO
	Home-Based Work VMT per Worker	33.80	33.38	30.06
2	Impact Threshold	30.14	30.14	30.14
	Significant Impact	**YES**	**YES**	NO
	Home-Based Work VMT per Worker	33.80	33.46	30.06
3	Impact Threshold	30.14	30.14	30.14
	Significant Impact	**YES**	**YES**	NO

[7] *California Air Pollution Control Officers Association, 2010*

Table IV.K-1:
VMT Analysis Summary

Site	VMT Analysis	Without Project	With Project & Tier 1-3 Reductions [c]	With Project & All VMT Reductions [c]
	Home-Based Work VMT per Worker	33.80	33.72	29.93
4	Impact Threshold	30.14	30.14	30.14
	Significant Impact	**YES**	**YES**	NO
	Home-Based Work VMT per Worker	30.84	29.03	29.03
A	Impact Threshold	30.14	30.14	30.14
	Significant Impact	**YES**	NO	NO
	Home-Based Work VMT per Worker	33.80	31.74	29.50
B	Impact Threshold	30.14	30.14	30.14
	Significant Impact	**YES**	**YES**	NO
	Home-Based Work VMT per Worker	33.80	31.34	29.84
C	Impact Threshold	30.14	30.14	30.14
	Significant Impact	**YES**	**YES**	NO
	Home-Based Work VMT per Worker	33.80	31.56	30.06
D	Impact Threshold	30.14	30.14	30.14
	Significant Impact	**YES**	**YES**	NO
	Home-Based Work VMT per Worker	30.84	30.50	29.12
Meadows	Impact Threshold	30.14	30.14	30.14
	Significant Impact	**YES**	**YES**	NO
	Home-Based Work VMT per Worker	30.84	30.62	29.22
Stonegate	Impact Threshold	30.14	30.14	30.14
	Significant Impact	**YES**	**YES**	NO

Notes:
[a] Project Analysis based on the San Gabriel Valley Council of Governments (SGVCOG) VMT Evaluation Tool (October 2020).
[b] Baseline Area VMT represents value of SGVCOG region VMT.
[c] The following VMT reduction strategies were variously accounted for in the VMT evaluation:
Increase residential density (Tier 1)
Increase residential diversity (Tier 1)
Affordable Housing (Tier 1)
Traffic Calming (On-Site only) (Tier 2)
Pedestrian Networks (On-Site only) (Tier 2)
Provide Bike Facilities w/ end-of-trip bike facilities (Tier 3)
School pool programs (Tier 4)
Marketing and education (Tier 4)
Telecommuting and Alternative Work Schedules (Tier 4)
Neighborhood Schools (Tier 4)
Unbundle Parking Costs (Tier 4)
Bike Share Program (Tier 4)

Project VMT, Prior to Mitigation

As shown in Table IV.K-1, the VMT Calculator estimates that the opportunity sites without the development of the allowed increased in housing would generate an average Total VMT per Service Population of 33.80 for Sites 1-4 and A-B and 30.84 for Sites C and D (the Meadows and Stonegate Sites) all of which exceed the SGVCOG significant VMT impact threshold of 30.14. Thus, without the consideration of any project design features (PDF) or transportation demand management strategies (TDM) all ten sites would result in significant VMT impacts.

Project Design Features Added to Sites

The addition of PDF measures would reduce the VMT impacts of each site. The available PDF strategies are listed as Tier 1-3 improvements on the bottom of Table IV.K-1.

Sites 1 Through 4

Also shown in Table IV.K-1, Sites 1 through 4 incorporate design features that would reduce VMT of the existing Sites including:

- an increase in residential density and diversity, categorized under Tier 1 Project Characteristics of VMT reduction strategies;
- on-site traffic calming and pedestrian network improvements, categorized under Tier 2 Project Characteristics of VMT reduction strategies; and
- the provision of bike parking and end-of-trip facilities, categorized under Tier 3 Project Characteristics of VMT reduction strategies.

With the development of the Sites and application of the above design features, the opportunity sites would generate an average Total VMT per Service Population between 32.23 and 33.72, which exceeds the SGVCOG significant VMT impact threshold of 30.14. Therefore, mitigation measures would be required to further reduce Total VMT per Service Population.

Sites A Through D

Also shown in Table IV.K-1, Sites A through D incorporate similar design features that would reduce VMT of the existing Sites including:

- an increase in residential density and diversity, as well as affordable housing requirements categorized under Tier 1 Project Characteristics of VMT reduction strategies;
- on-site traffic calming and pedestrian network improvements, categorized under Tier 2 Project Characteristics of VMT reduction strategies; and
- the provision of bike parking and end-of-trip facilities, categorized under Tier 3 Project Characteristics of VMT reduction strategies.

With the development of the opportunity sites and application of the above design features, Site A would generate an average Total VMT per Service Population of 29.03 which is below the SGVCOG significant VMT impact threshold of 30.14. Sites B through D would generate an average Total VMT per Service Population between 31.34 and 31.74, which exceed the SGVCOG significant VMT impact threshold of

30.14. Therefore, mitigation measures would be required to further reduce Total VMT per Service Population for Sites B through D.

Meadows and Stonegate

Meadows and Stonegate incorporate similar design features that would reduce VMT of the existing sites including:

- an increase in residential density and diversity categorized under Tier 1 Project Characteristics of VMT reduction strategies;
- on-site traffic calming and pedestrian network improvements, categorized under Tier 2 Project Characteristics of VMT reduction strategies; and
- the provision of bike parking and end-of-trip facilities, categorized under Tier 3 Project Characteristics of VMT reduction strategies.

With the development of the Sites and application of the above design features, the sites would generate an average Total VMT per Service Population of 30.50 for Meadows and 30.62 for Stonegate, which both exceed the SGVCOG significant VMT impact threshold of 30.14. Therefore, mitigation measures would be required to further reduce Total VMT per Service Population.

Mitigation Measures:

TRANS-1: A TDM program would be implemented as part of each opportunity site's mitigation program aimed at further reducing VMT and vehicular trips to each Project Site through transportation services. The TDM Program would be intended to promote non-automobile travel and the reduction of single occupancy vehicle trips. As the individual development projects are submitted to the City, the TDM program for each opportunity site would be subject to review and approval by the City. The individual site TDM programs analyzed for the analysis would include various combinations of the Tier 4 TDM measures listed on the bottom of Table IV.K-1. These strategies include school carpool programs, marketing and education, telecommuting and alternative work schedules, neighborhood schools, unbundled parking costs, and bike share programs. Each of these strategies is explained briefly below.

TDM Mitigation Strategies

School Carpool Programs

The individual site's TDM program would provide services to match residents to establish carpools to provide the potential for school-aged children to carpool to and from school and reduce the number of vehicle trips to and from each Site.

Marketing and Education

The TDM program would provide informational services to opportunity site residents to educate them on the various non-automobile travel modes available in the area. Generally, this program consists of an informational kiosk in the development with information on accessible transit, bike, and ride-sharing services.

Telecommuting and Alternative Work Schedules

The TDM program would encourage or incentivize working from home and/or alternative work schedules that reduce the potential for employees to travel to work thereby reducing the number of vehicle trips to and from the Project Site.

Provision of Neighborhood Schools

The TDM program would encourage opportunity site residents to send children to local schools rather than out-of-area schools to reduce travel distance of trips between the Sites and schools.

Unbundling Parking Costs

The individual site's TDM Program would unbundle the parking costs from the rental/sale price of the multifamily unit. The parking space monthly rental or purchase price would be separated from the unit monthly rental or purchase price. Research has shown that the number of vehicles per household decreases when the tenants/owners realize the actual costs of the parking spaces for residential units and the overall VMT form that unit decreases.

Bike Share Programs

The individual site's TDM program would provide either financial assistance or physical space to help establish or expand a City-wide bike share program.

Effects of TDM Mitigation on Site VMT

For the purposes of this analysis, implementation of combinations of the programs discussed above as TDM strategies was considered as mitigation in the VMT evaluation. As shown in Table IV.K-1, the opportunity sites with implementation of a mitigation program are estimated to generate average Total VMT per Service Population between 29.03 and 30.06. The average Total VMT per Service Population with mitigation would not exceed the SGVCOG significant VMT impact threshold of 30.14. Therefore, each opportunity site, with mitigation, would fully mitigate its VMT impact.

The detailed output from the VMT Calculator and the more detailed description of the TDM program for each site are provided in Appendix E, Transportation.

It is important to note that the project design features and the mitigation measures discussed below are examples of potential VMT reduction programs that would reduce each opportunity site's VMT impacts to less than significant, but they are not the only set of features or combination of measures that could be applied to each site to reduce VMT. They are intended to prove that the Total VMT per Service Population can be reduced to less than significant levels with the development of each opportunity site using reasonable VMT reduction features and measures. As they are developed, each opportunity site can develop a VMT reduction program that will be tailored to the needs of the developments' residents which may include, but are not limited to, the features and measures analyzed.

CUMULATIVE VMT ANALYSIS

Cumulative effects of development projects are determined based on the consistency with the air quality and greenhouse gas reduction goals of Connect SoCal – The 2020-2045 Regional Transportation Plan /

Sustainable Communities Strategy[8](RTP/SCS) in terms of development location, density, and intensity. The RTP/SCS presents a long-term vision for the region's transportation system through Year 2045 and balances the region's future mobility and housing needs with economic, environmental, and public health goals.

As detailed in Section 3.1.4.3 of the Los Angeles County Public Works Transportation Impact Analysis Guidelines[9] (County TIA Guidelines), for projects that do not demonstrate an impact by applying an efficiency-based impact threshold (i.e., Total VMT per Service Population) in the project impact analysis, a less than significant impact conclusion is sufficient in demonstrating there is no cumulative VMT impact for those projects that align with the long-term VMT and greenhouse gas reduction goals of the RTP/SCS. The project would not result in a significant VMT impact with implementation of the mitigation program, as described above. The addition of multifamily residential units, including affordable housing units, in an infill development format is consistent with the goals of the RTP/SCS. Therefore, the project is not anticipated to result in a cumulative VMT impact, and no further evaluation or mitigation measures would be required.

Impact K-3: Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Impact Analysis:

This analysis requires that a project undergo further evaluation if it proposes new driveways or new vehicle access points to the property from the public ROW or it proposes modifications along the public ROW (i.e., street dedications). Site access plans will be developed in the future for each site to ensure that each opportunity site would not substantially increase hazards due to geometric design features, including safety, operational, or capacity impacts, with consideration to the following factors: (1) the relative amount of pedestrian activity at opportunity site access points; (2) design features/physical configurations that affect the visibility of pedestrians and bicyclists to drivers entering and exiting the site, and the visibility of cars to pedestrians and bicyclists; (3) the type of bicycle facilities the opportunity site driveway(s) crosses and the relative level of utilization; (4) the physical conditions of the site and surrounding area, such as curves, slopes, walks, landscaping or other barriers that could result in vehicle/pedestrian, vehicle/bicycle, or vehicle/vehicle impacts; (5) the opportunity site location, or opportunity site-related changes to the public ROW, relative to proximity to the HIN or a Safe Routes to School program area; and (6) any other conditions, including the approximate location of incompatible uses that would substantially increase a transportation hazard.

DRIVEWAY DESIGN FEATURES

Each opportunity site either has an existing driveway or will design driveway(s) that meet the principles discussed above. Each site will require site plan review when the City can review the access plan to determine if the driveways are in compliance.

Pedestrian and Bicycle Activity

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[8] *SCAG, Connect SoCal – The 2020-2045 Regional Transportation Plan / Sustainable Communities Strategy, adopted September, 2020.*

[9] *Los Angeles County Public Works, Los Angeles County Public Works Transportation Impact Analysis Guidelines, July 23, 2020.*

Access to each opportunity site would be designed to remain clear of hardscapes, vegetation, or signage that would impede sight lines to allow for the saftest interaction between pedestrians, vehicles, and bicycles.

Physical Terrain

The opportunity sites are mostly located on flat parcels with little to no change in vertical elevation. Therefore, no line-of-sight issues would be caused by changes in elevation and drivers would be able to safely identify approaching vehicles, pedestrians, and bicycles at the opportunity site driveways. Driveways will be designed to intersect the public ROW at right angles with adequate building setback to allow pedestrians and bicyclists to observe vehicles within the driveways.

All landscaping would be designed to provide appropriate visibility between vehicles and pedestrians.

Summary

When designed, each opportunity site would be required to not present any geometric design features that would substantially increase hazards related to traffic movement, mobility, or pedestrian accessibility and, thus, impacts would be considered less than significant.

Mitigation Measures:

None required.

Impact K-4: Would the project result in inadequate emergency access.?

Impact Analysis:

The addition of 211-280 residential dwelling units to the housing stock total in the City of Sierra Madre is not expected to add enough traffic to any single street in the City to cause safety or congestion problems. The total VMT for the Transportation Analysis Zones that include the City of Sierra Madre is projected to be 427,000 VMT/day. The addition of 280 residential dwelling units to the City would add only a new 16,800 VMT/day or less than a 4% increase. Therefore, the addition of residential dwelling units, dispersed through the community as proposed, is not anticipated to increase emergency vehicle response times in the City.

Mitigation Measures:

None required.

4. LEVEL OF SIGNIFICANCE AFTER MITIGATION

All impacts will be reduced to less-than significant levels with the implementation of mitigation measure TRANS-1. Once implemented, impacts would be similarto the findings of the 2015 General Plan EIR and less than significant. The Orange Grove Avenue/Baldwin Avenue intersection mitigation measure has been constructed and is therefore, no longer required for buildout of the General Plan.

IV. ENVIRONMENTAL IMPACT ANALYSIS
L.1 UTILITIES – WATER

1. INTRODUCTION

This section of the SEIR analyzes the potential environmental effects related to water supply and infrastructure from implementation of the proposed project. Information in this section is based in part on the City's 2020 Urban Water Management Plan (UWMP).[1]

A. 2015 General Plan EIR Analysis and Conclusions

The 2015 General Plan EIR determined that existing water delivery systems are adequate to meet the need of future development that would be accommodated by the 2015 General Plan Update. There are no deficiencies in the City's water delivery system and no deficiencies would occur with implementation of the 2015 General Plan Update. As such, the 2015 General Plan EIR found that implementation of the 2015 General Plan Update would not significantly impact water delivery infrastructure.

The 2015 General Plan EIR determined that the minor increase in land uses under the 2015 General Plan Update would not adversely affect the City's water supply. However, although the 2010 UWMP indicates sufficient water supplies, the severity and uncertain duration of California's recent drought conditions makes water supply unreliable. Therefore, water supply impacts were found to be potentially significant under buildout of the 2015 General Plan Update.

2. ENVIRONMENTAL SETTING

A. Existing Conditions

1) *Water Supply and Reliability*

Water Supply

Sierra Madre's water quality and supply is maintained by the City's Water Division, a water retail agency and department within the Sierra Madre Public Works Department. The City is a sub-agency of San Gabriel Valley Municipal Water District (SGVMWD), a wholesale water agency. The City's water service area encompasses an area of approximately 2.9 square miles and its water supply is delivered through approximately 46 miles of water mains. The City's water supply sources include groundwater pumped from the Raymond Basin, treated imported water purchased from SGVMWD through the Metropolitan Water District of Southern California (MWD) (imported water is allowed to recharge the groundwater basin, then produced as groundwater supply), and local treated groundwater from the West Tunnel located in the Little Santa Anita Canyon. The City's main source of water supply is groundwater pumped from the Raymond Basin.

The City produces groundwater from four production wells (Wells No. 3, No. 4, No. 5, and No. 6) within the Santa Anita Subarea (Eastern Unit) of the Raymond Basin (the Basin). Sierra Madre shares this source

[1] *City of Sierra Madre, Department of Public Works, Water Division, 2020 Urban Water Management Plan, July 2021.*

of water with the City of Arcadia. Through adjudication, the City has water rights to 1,764.0 acre-feet per year (AFY) from the Santa Anita Subarea. The City also has the right to obtain credit for "salvage water." Salvage water is surface water percolated into the Santa Anita sub-area minus losses for natural percolation and subsurface outflow. Salvage water credits allow the City to (annually) extract more than 1,764.0 acre-feet from the Santa Anita Sub-area. For most of its time, the City's main source of supply was through its four wells. However, due to recent multiple dry year conditions, the Raymond Basin Management Board implemented a "500-foot" level limitation for all Decreed Rights to the Santa Anita Subarea in 2013. As a result, the City's adjusted right to the Santa Anita Subarea was limited to 940.0 AFY. In October 2015, after five years of unprecedented drought, the Raymond Basin Management Board authorized the use of imported water for spreading on behalf of the City. MWD entered into an agreement with the City and SGVMWD to deliver up to 2,500 AFY of treated, imported water for spreading within the Santa Anita sub-area. A new imported water connection was constructed at the Sierra Madre Spreading Grounds for the purposes of spreading to allow for additional groundwater by the City. Over the past five years, MWD has delivered 1,036 AFY to 2,044 AFY, with an average of 1,550 AFY, for spreading on behalf of the City. Due to the "500-foot" level limitation is in effect, the City's water rights to the Raymond Basin are currently based on the adjusted rights to the Santa Anita Subarea of 940.0 AFY plus any imported water spread at the Sierra Madre Spreading Grounds. Over the past five years, the City has produced 1,023 AFY to 2,387 AFY, with an average of 1,967 AFY from the Raymond Basin.

The City also produces groundwater from local treated groundwater water from the West Tunnel located in the Little Santa Anita Canyon. The tunnel acts as a horizontal well and produces groundwater by gravity flow. The West Tunnel has a maximum capacity of approximately 500 gallons per minute. Water from a second tunnel, the East Tunnel, is currently inactive due to the influence of surface water on its north branch. The tunnels were constructed (in the 1920s or earlier) and predate the adjudication of the Raymond Basin (discussed above). The Raymond Basin adjudication did not address this source of water and the City maintains the full right to the water produced from these tunnels. Since the production of water from these tunnels is dependent on the hydrologic cycle, production rates decline after several consecutive years of dry conditions. Thus, in multiple dry years, these tunnels would not provide a significant source of supply. Over the past five years, the City has produced 4 AFY to 9 AFY, with an average of 6 AFY from the West Tunnel.

The City is also a party to the Main Basin Judgment but historically did not have wells in the Main Basin. However, the City has proposed constructing a new well jointly with the City of Arcadia. Under the Main Basin Adjudication, the City does not have pumping rights but can pump from the Main Basin. Although there is no limit on the quantity of water that may be extracted by Parties to the Main Basin Adjudication, including the City, groundwater production in excess of a Party's water right, or its proportional share (pumper's share) of the Operating Safe Yield, requires purchase of untreated imported water to recharge the Main Basin. The City plans to obtain groundwater produced from the Main Basin, and delivered through an inter-connecting pipeline with the City of Arcadia. If the City obtains any water from the Main Basin, replacement water may be purchased from SGVMWD to recharge the Main Basin. Any water pumped from Main Basin wells on behalf of the City will be counted toward the City. Over the past five years, the City has not obtained any groundwater from the Main Basin (through the City of Arcadia).

Table IV.L.1-1, Historical Water Supplies, presents the water supplies available to the City over the past 10 years. As shown in **Table IV.L.1-1**, the City's total water demands over the past 10 years have ranged from 1,982 acre-feet per year (AFY) to 2,841 AFY, with an average of 2,387 AFY.

Table IV.L.1-1
Historical Water Supplies

Fiscal Year	Potable Water Supplies (acre-feet)			Total
	Raymond Basin Groundwater	West Tunnel	MWD Imported Water [1]	
2010-2011	2,189	489	0	2,678
2011-2012	2,408	278	0	2,686
2012-2013	2,691	149	0	2,841
2013-2014	866	22	1,611	2,499
2014-2015	76	2	2,047	2,125
2015-2016	1,023	5	1,183	2,211
2016-2017	1,979	4	0	1,982
2017-2018	2,235	7	0	2,241
2018-2019	2,211	9	0	2,220
2019-2020	2,387	5	0	2,392

Notes:
1 Column reflects water delivered for direct use. Treated, imported replenishment MWD water deliveries for Raymond Basin spreading purposes during FY 2015-16, FY 2016-17, FY 2017-18, FY 2018-19, and FY 2019-20 totaled approximately 862 AF, 1,621 AF, 1,325 AF, 1,036 AF, and 1,724 AF, respectively.
Source: City of Sierra Madre, Department of Public Works, Water Division, 2020 Urban Water Management Plan, July 2021

Water Reliability

The source of natural groundwater supply to the Basin is direct rainfall, percolation from surface runoff from the northern and western sides, artificial recharge at spreading basins operated by Los Angeles County Department of Public Works and Sierra Madre, and presumably some underground percolation of water from the mountain mass to the alluvium. The Basin supplies over half of the overlying area's total annual water needs and is one of the most valuable local resources. No recent estimates of available groundwater storage have been made for in the Raymond Basin. A Department of Water Resources (DWR) (1971) study estimated the available stored water to be 1,000,000 acre-feet in 1970, leaving about 450,000 acre-feet of storage space available. The Raymond Basin groundwater supplies are managed by the Raymond Basin Watermaster. During a normal year (FY 2019-20), the City met about 100 percent of its total demands with supplies from the Raymond Basin. During a single dry year (FY 2017-18), the City met about 100 percent of its total demands with supplies from the Raymond Basin. During a five consecutive year drought multiple dry year period (FY 2011-12 to FY 2015-16), the City met between and 95 percent of its total demands with supplies from the Raymond Basin.

As discussed above, the City's emergency groundwater supply can include water from the Main Basin that is obtained through the City of Arcadia, and which requires purchase of an equal amount of untreated imported water from SGVMWD to recharge the Main Basin. In addition, the City has proposed constructing a new well within the Main Basin jointly with the City of Arcadia. The major sources of recharge to the Main Basin are direct penetration of rainfall on the valley floor, percolation of runoff from the mountains, percolation of imported water and return flow from applied water. Rainfall occurs predominantly in the winter months and is more intense at higher elevations and closer to the San Gabriel Mountains. Local runoff is stored in a series of reservoirs operated by DPW and diverted into spreading grounds to replenish the groundwater supply. Groundwater recharge occurs every year and is exhibited as increasing water levels. High rainfall years can be identified as increases in the groundwater level of 30 feet or more in one year. The Main San Gabriel Basin has a freshwater storage capacity of about 8.7 million acre-feet. However, during a historical low, the Main Basin has about 7,400,000 acre-feet of available storage. During the period of management under the Judgment, significant drought events have occurred

from 1969 to 1977, 1983 to 1991, 1998 to 2004, 2006 to 2009, and 2011 to 2015. In each drought cycle the Main Basin has been managed to maintain water levels. Based on SGVMWD's Draft 2020 UWMP, the untreated imported water supply from SGVMWD is deemed reliable for the next 25 years, however, the City's treated imported water supplies from SGVMWD (including through MWD) may potentially be impacted during a multi-year drought or other conditions which may limit SGVMWD from delivering sufficient water supplies to all of its sub-agencies.

As discussed above, the City also obtains local groundwater supplies through the tunnel sources. The amount of water available via the Little Santa Anita Canyon tunnels varies greatly depending on rainfall amounts and season of the year. Because production in the spring tunnels is dependent upon the hydrologic cycle, during dry years less water is available. During a normal year (FY 2019-20), the City met less than 1 percent of its total demands with supplies from tunnel sources. During a single dry year (FY 2017-18), the City met less than 1 percent of its total demands with supplies from tunnel sources. During a five consecutive year drought multiple dry year period (FY 2011-12 to FY 2015- 16), the City met between 0 and 10 percent of its total demands with supplies from tunnel sources.

The City's 2020 UWMP included a comparison of projections of future water supplies and demands. As detailed in the 2020 UWMP, the City projects a water supply: between 2,487 AFY and 2,533 AFY for normal years; between 2,331 AFY and 2,375 AFY for single dry years; and between 2,210 AFY and 3,010 AFY for multiple dry years. In the future the City will produce groundwater from the Main Basin. Furthermore, as a result of the City's diverse water supply portfolio, water supplies may be re-apportioned during a five consecutive year drought to meet the City's water demands. Accordingly, the 2020 UWMP determined that the City will have sufficient water supplies available to meet projected demands and a single dry year or a five consecutive year drought period will not compromise the City's ability to provide a reliable supply of water to its customers.[2] In addition, the City has entered into a Cyclic Storage agreement with the Main Basin Watermaster to store imported water in the Main Basin for a period of up to five years to be used to offset a future Replacement Water requirement. The City also has emergency interties (or interconnections) with other water agencies (Cities of Pasadena and Arcadia) that serve as short-term emergency water supplies. Emergency interconnections are distribution system interconnections between water agencies for use during critical situations where one system or the other is temporarily unable to provide sufficient potable water to meet its water demands and/or fire protection needs. An emergency interconnection will allow a water system to continue serving water during critical situations such as local water supply shortages as a result of earthquakes, fires, prolonged power outages, and droughts. As previously discussed, the City is also planning to develop a new joint well project in partnership with the City of Arcadia. This project is expected to yield over 2,000 gpm (with 1,000 gpm going to the City of Sierra Madre) from the Main Basin, which will eliminate the need to deliver treated imported water to replenish the Raymond Basin. Furthermore, the City rehabilitates its groundwater wells as necessary in an ongoing process to improve groundwater production. Rehabilitation will also extend the life of the wells, provide higher pumping efficiencies, and control sanding issues.

Water Conservation

Since the City is primarily built out, only limited increases in population and service connections are anticipated in the future. However, while Sierra Madre does not anticipate great increases in water

[2] *City of Sierra Madre, Department of Public Works, Water Division, 2020 Urban Water Management Plan, July 2021, pages 7-1 – 7-2.*

demand, the City has prepared for the possibility of future water stress, in which case conservation measures would be needed to ensure adequate supply to all water customers. Water conservation can be considered an additional source of potable water because it frees up water that otherwise might be used inefficiently. For this reason, the City adopted a Mandatory Water Conservation Plan (Chapter 13.24 of the City's Municipal Code), which restricts the use of water under circumstances determined to be "urgent" by the Sierra Madre City Council. With shortage restriction already adopted, Sierra Madre will be able to respond quickly and efficiently to water shortages that may arise in its future. Due to the ongoing drought and increasing state mandates for urban water conservation, it is anticipated that there will be numerous amendments to the Mandatory Water Conservation Plan in the coming months and years.

The City also implements its Water Efficiency Landscape (Chapter 15.60 of the City's Municipal Code) and Low Impact Development Ordinances (integrated within Section 15.04.070 [Stormwater Retention] of the City's Municipal Code) to require water conservation efforts associated with development and redevelopment. Additionally, the April 1, 2015 Executive Order issued by Governor Jerry Brown requires urban water suppliers (including Sierra Madre) to update their water efficient landscape ordinances in order to enhance conservation and to specifically limit the planting of turf grass. Furthermore, the City implements the 2019 Green Building Standards Code (adopted by reference in Chapter 15.30 [Green Building Standards Code] of the City's Municipal Code), which contains requirements for indoor water use reduction and site irrigation conservation. Future development projects are also required to comply with the provisions of the 2019 Green Building Standards Code.

Water Infrastructure

The City of Sierra Madre is the license and operator of its own water production and distribution system under the City's Water Division, a department within the Sierra Madre Public Works Department. Water is normally produced from four wells located in the vicinity of Sierra Vista Park. Water from the wells flows directly into the City's Granulated Activated Charcoal treatment system. The water then flows into a small reservoir/pumping forebay at the City maintenance yard and is pumped from there directly and indirectly to the City's eight reservoirs; the combined storage capacity of the reservoirs is 7.46 million gallons. From the reservoirs, the water is distributed to all residential, commercial, and institutional customers via over 46 miles of pipeline. Water is moved through the distribution pipeline system by gravity to over 3,800 individual metered water services.

The City's water system also incorporates four interconnections with the water systems of other agencies. On the west, there are two four-inch unidirectional flow interconnections with the City of Pasadena water system. The northerly interconnection on Michillinda Avenue flows east to west, for Sierra Madre to supply water to Pasadena. The southerly interconnection flows west to east; from this location Sierra Madre can request to draw water from Pasadena. These connections are suitable for use only in extreme emergency, as their small diameter and location within system pressure zones will not provide a significant flow of water, and because of differences in the treatment processes of the two cities' water, if the two waters are mixed in either system, a harmless discoloration results. The third system connection is a twelve-inch pipeline along East Sierra Madre Boulevard linking Sierra Madre with the water system of the City of Arcadia. It is via this pipeline that Sierra Madre can indirectly access its SGVMWD source of water from the Main Basin. The fourth system interconnection is the connection to the MWD Foothill Feeder on East Grand View. The source can provide up to 2,500 acre-feet of water per year.

While significant strides have been made to upgrade the City's water system, multiple components of the water infrastructure system have reached the end of their service lives. Each of the City's four production wells, several of the system's booster pumps, one water storage reservoir, and a large number of water

main segments need replacement. There are neighborhoods throughout Sierra Madre that are served by water mains that are of inadequate size to properly serve existing development and land uses. Some of these are old infrastructure that need replacement simply because of age and deterioration. In addition, one reservoir needs seismic upgrades and the City should construct a production well in the Main Basin to increase water supply reliability. The majority of planned water system improvement are needed in order to improve water supply reliability, rather than system capacity. Replacement of reservoirs, pipelines and wells will be done to ensure that the system is dependable; however, each project will be implemented with consideration given to current standards of service and capacity.

The City's Water Division has historically used several sources of funding for water system improvements. Federal funding in the form of congressional grants through the United States Environmental Protection Agency (USEPA) have paid for portions of several projects in Sierra Madre. Each federal grant must be "matched" with local funds. Sierra Madre's local match has been provided from local water revenue, loans, and grants from SGVMWD, and from the proceeds of the City's water revenue bonds.

2) *Housing Element Project Sites*

Site 1

Site 1 includes nine parcels along Mariposa Avenue and Lima Street that are currently developed with single- and multi-family residential uses. Site 1 is currently served by existing onsite water supply infrastructure.

Site 2

Site 2 includes ten parcels along Suffolk Avenue and Baldwin Avenue developed with older multi-family development. Site 2 is currently served by existing onsite water supply infrastructure.

Site 3

Site 3 includes one parcel along Sierra Madre Boulevard that is currently developed with four older multi-family residential buildings, open space, and parking areas. Site 3 is currently served by existing onsite water supply infrastructure.

Site 4

Site 4 includes one parcel along N. Baldwin Avenue that is currently developed with a single-family residence. Site 4 is currently served by existing onsite water supply infrastructure.

Site A

Site A is located on the parking area of St. Rita Catholic Church. Because no land uses requiring water supply are currently located on Site A, the site may not be currently served by existing onsite water supply infrastructure. However, given the developed conditions of the surrounding area, it is likely that existing offsite water mains are available for connection.

Site B

Site B is located in the parking area of the United Methodist Church. Because no land uses requiring water supply are currently located on Site B, the site may not be currently served by existing onsite water supply

infrastructure. However, given the developed conditions of the surrounding area, it is likely that existing offsite water mains are available for connection.

Site C

Site C is located on the parking area of the Old North Church. Because no land uses requiring water supply are currently located on Site C, the site may not be currently served by existing onsite water supply infrastructure. However, given the developed conditions of the surrounding area, it is likely that existing offsite water mains are available for connection.

Site D

Site D is located on asphalt play areas and the parking area of the Bethany Church and School. Because no land uses requiring water supply are currently located on Site D, the site may not be currently served by existing onsite water supply infrastructure. However, given the developed conditions of the surrounding area, it is likely that existing offsite water mains are available for connection.

B. Regulatory Setting

1) *State*

California Urban Water Management Act

The California Urban Water Management Planning Act (Water Code, Section 10610, et seq.) addresses several state policies regarding water conservation and the development of water management plans to ensure the efficient use of available supplies. The California Urban Water Management Planning Act also requires Urban Water Suppliers to develop Urban Water Management Plans (UWMPs) every five years to identify short-term and long-term demand management measures to meet growing water demands during normal, dry, and multiple-dry years. Urban Water Suppliers are defined as water suppliers that either serve more than 3,000 customers or provide more than 3,000 acre-feet per year (af/y) of water to customers.

Senate Bill 610, Senate Bill 221, and Senate Bill 7

Two of the state laws addressing the assessment of water supply necessary to serve large-scale development projects, Senate Bill (SB) 610 and SB 221, became effective January 1, 2002. SB 610, codified in Water Code Sections 10910-10915, specifies the requirements for water supply assessments (WSAs) and their role in the California Environmental Quality Act (CEQA) process, and defines the role UWMPs play in the WSA process. SB 610 requires that, for projects subject to CEQA that meet specific size criteria, the water supplier prepare WSAs that determine whether the water supplier has sufficient water resources to serve the projected water demands associated with the projects. SB 610 provides specific guidance regarding how future supplies are to be calculated in the WSAs where an applicable UWMP has been prepared. Specifically, a WSA must identify existing water supply entitlements, water rights, or water service contracts held by the public water system, and prior years' actual water deliveries received by the public water system. In addition, the WSA must address water supplies over a 20-year period and consider normal, single-dry, and multiple-dry year conditions. In accordance with SB 610, projects for which a WSA must be prepared are those subject to CEQA that meet any of the following criteria:

- Residential developments of more than 500 dwelling units;
- Shopping center or business establishment of more than 500,000 square feet of floor space or employing more than 1,000 persons;
- Commercial office buildings of more than 250,000 square feet of floor space or employing more than 1,000 persons;
- Hotel or motels, or both, having more than 500 rooms;
- a proposed industrial, manufacturing, or processing plant or industrial park of more than 40 acres of land, more than 650,000 square feet of floor area, or employing more than 1,000 persons;
- Mixed-use projects that falls in one or more of the above-identified categories; or
- A project not falling in one of the above-identified categories but that would demand water equal or greater to a 500 dwelling-unit project.

The WSA must be approved by the public water supplier serving the project at a regular or special meeting and must be incorporated into the CEQA document. The lead agency must then make certain findings related to water supply based on the WSA.

In addition, under SB 610, a water supplier responsible for the preparation and periodic updating of an UWMP must describe the water supply projects and programs that may be undertaken to meet the total project water use of the service area. If groundwater is identified as a source of water available to the supplier, the following additional information must be included in the UWMP: (1) a groundwater management plan; (2) a description of the groundwater basin(s) to be used and the water use adjudication rights, if any; (3) a description and analysis of groundwater use in the past 5 years; and (4) a discussion of the sufficiency of the groundwater that is projected to be pumped by the supplier.

SB 7, enacted on November 10, 2009, mandates new water conservation goals for UWMPs, requiring Urban Water Suppliers to achieve a 20 percent per capita water consumption reduction by the year 2020 statewide, as described in the "20 x 2020" State Water Conservation Plan.[3] As such, each updated UWMP must now incorporate a description of how each respective urban water supplier will quantitatively implement this water conservation mandate, which requirements in turn must be taken into consideration in preparing and adopting WSAs under SB 610.

SB 221 also addresses water supply in the land use approval process for large residential subdivision projects. However, unlike SB 610 WSAs, which are prepared at the beginning of a planning process, SB 221-required Water Supply Verification (WSV) is prepared at the end of the planning process for such projects. Under SB 221, a water supplier must prepare and adopt a WSV indicating sufficient water supply is available to serve a proposed subdivision, or the local agency must make a specific finding that sufficient water supplies are or will be available prior to completion of a project, as part of the conditions for the approval of a final subdivision map. SB 221 specifically applies to residential subdivisions of 500 units or more. However, Government Code Section 66473.7(i) exempts "…any residential project proposed for a

[3] *California State Water Resources Control Board, 20 x 2020 Water Conservation Plan, February 2010, https://www.waterboards.ca.gov/water_issues/hot_topics/20x2020/docs/20x2020plan.pdf, accessed July 6, 2021.*

site that is within an urbanized area and has been previously developed for urban uses; or where the immediate contiguous properties surrounding the residential project site are, or previously have been, developed for urban uses; or housing projects that are exclusively for very low and low-income households."

Senate Bill X7-7 – Water Conservation Act

Senate Bill X7-7 (Water Conservation Act of 2009), codified in the California Water Code Section 10608, requires all water suppliers to increase water use efficiency.

Enacted in 2009, this legislation sets an overall goal of reducing per capita urban water use, compared to 2009 use, by 20 percent by December 31, 2020. The State of California was required to make incremental progress towards this goal by reducing per capita water use by at least 10 percent on or before December 31, 2015. Monthly statewide potable water savings reached 25.1 percent in February 2017 as compared to that in February 2013.[4] Cumulative statewide savings from June 2015 through February 2017 were estimated at 22.5 percent.[5] Following a multi-year drought and improvements to hydrologic conditions, statewide potable water savings reached 14.7 percent in August 2017 as compared to August 2013 potable water production.[6]

Sustainable Groundwater Management Act of 2014[7]

The Sustainable Groundwater Management Act (SGMA) of 2014, passed in September 2014, is a comprehensive three-bill package that provides a framework for the sustainable management of groundwater supplies by local authorities.[8] The SGMA requires the formation of local groundwater sustainability agencies to assess local water basin conditions and adopt locally based management plans. Local groundwater sustainability agencies were required to be formed by June 30, 2017. The SGMA provides 20 years for groundwater sustainability agencies to implement plans and achieve long-term groundwater sustainability, and protect existing surface water and groundwater rights. The SGMA provides local groundwater sustainability agencies with the authority to require registration of groundwater wells, measure and manage extractions, require reports, assess fees, and request revisions of basin boundaries, including establishing new subbasins. Furthermore, SGMA requires governments and water agencies of high and medium priority basins to stop overdraft and bring groundwater basins into balanced levels of pumping and recharge. Under SGMA, these basins should reach sustainability within 20 years of implementing their sustainability plans. For the basins that are critically over-drafted the timeline is 2040. For the remaining high and medium priority basins, the deadline is 2042.

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[4] *State Water Resources Control Board, Fact Sheet, February 2017 Statewide Conservation Data, updated April 4, 2017.*

[5] *State Water Resources Control Board, Media Release, "Statewide Water Savings Exceed 25 Percent in February; Conservation to Remain a California Way of Life," April 4, 2017.*

[6] *State Water Resources Control Board, Fact Sheet, August 2017 Statewide Conservation Data, updated October 3, 2017.*

[7] *Sustainable Groundwater Management Act [And Related Statutory Provisions from SB1168 (Pavley), AB1739 (Dickinson), and SB1319 (Pavley) as Chaptered], 2015 Amendments, effective January 1, 2016.*

[8] *California Department of Water Resources. SGMA Groundwater Management. https://water.ca.gov/Programs/Groundwater-Management/SGMA-Groundwater-Management, accessed July 6, 2021.*

California Code of Regulations

Title 20

Title 20, Section 1605.3 (h) and 1505(i) of the California Code of Regulations (CCR) establishes applicable State efficiency standards (i.e., maximum flow rates) for plumbing fittings and fixtures, including fixtures such as showerheads, lavatory faucets and water closets (toilets). Among the standards, the maximum flow rate for showerheads manufactured on or after July 1, 2018 is 1.8 gpm at 80 psi; and lavatory faucets manufactured after July 1, 2016 is 1.2 gpm at 60 psi. The standard for toilets sold or offered for sale on or after January 1, 2016 is 1.28 gallons per flush.[9]

CALGreen Code

Part 11 of Title 24, the title that regulates the design and construction of buildings, establishes the California Green Building Standards (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 reduced negative impact or a positive environmental impact and encouraging sustainable construction practices in the following categories: planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality. The CALGreen Code includes both mandatory measures as well as voluntary measures. The mandatory measures establish minimum baselines that must be met in order for a building to be approved. The mandatory measures for water conservation provide limits for fixture flow rates, which are the same as those for the Title 20 efficiency standards listed above. The voluntary measures can be adopted by local jurisdictions for greater efficiency.

Plumbing Code

Title 24, Part 5 of the California Code of Regulations establishes the California Plumbing Code. The California Plumbing Code sets forth efficiency standards (i.e., maximum flow rates) for all new federally-regulated plumbing fittings and fixtures, including showerheads and lavatory faucets. The 2019 California Plumbing Code, which is based on the 2018 Uniform Plumbing Code, has been published by the California Building Standards Commission and went into effect on January 1, 2019.

State of Drought Emergency Declaration and Executive Orders

In response to California's drought conditions, on January 17, 2014, Governor Brown declared a State of Drought Emergency and directed state officials to take numerous necessary actions with local Urban Water Suppliers and municipalities to reduce the impacts of the ongoing drought conditions that had been occurring in California since approximately 2009.[10] Subsequently, four Executive Orders were issued between April 2015 to April 2017 to address changing drought conditions and provide guidance for addressing the drought conditions.

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[9] *California Code of Regulations, Title 20, Section 1605.3(h), page 306, available at: https://govt.westlaw.com/calregs/Browse/Home/California/CaliforniaCodeofRegulations, accessed July 6, 2021.*

[10] *State of California, Office of Governor Edmund G. Brown, Jr., Governor Brown Declares Drought State of Emergency, January 17, 2014, available at: https://www.ca.gov/archive/gov39/2014/01/17/news18368/index.html, accessed July 6, 2021.*

Executive Order B-29-15 (April 2015) imposed a mandatory 25 percent statewide water reduction on potable water use by Urban Water Suppliers. It prioritized water infrastructure projects, incentivized water efficiencies, and streamlined permitting with new approval processes for water transfers and emergency drinking water projects. Executive Order B-36-15 (November 2015) called for additional actions to build on the state's response to record dry conditions and assisted recovery efforts from devastating wildfires; and Executive Order B-37-16 (May 2016) continued water use restrictions from Executive Order B-29-15 as drought conditions continued to persist. Executive Order B-37-16 called for long-term improvements to local drought preparation across the state, and directed the California State Water Resources Control Board (SWRCB) to develop proposed emergency water restrictions for 2017 if the drought persists.[11]

The regulatory requirements resulting from these Executive Orders were codified in Article 22.5, Drought Emergency Water Conservation of the California Code of Regulations.

In May 2016, SWRCB adopted a revised emergency water conservation regulation, effective June 2016 through at least February 2017, which rescinded numeric reduction targets for Urban Water Suppliers, instead requiring locally developed conservation standards based upon each agency's specific circumstances.[12]

Finally, on April 7, 2017, Executive Order B-40-17 was issued to formally end the drought emergency and lifted the drought emergency in all California counties except Fresno, Kings, Tulare, and Tuolumne. In response to Executive Order B-40-17, on April 26, 2017, the SWRCB partially repealed the emergency regulation in regard to water supply stress test requirements and remaining mandatory conservation standards for urban water suppliers.[13,14] The order also rescinded two drought-related emergency proclamations and four drought-related executive orders. Cities and water districts throughout the state are required to continue reporting their water use each month. Executive Order B-40-17 continued the ban on wasteful practices, including hosing off sidewalks and running sprinklers when it rains.

California Water Plan

Required by the CWC Section 10005(a), the California Water Plan is the state's strategic plan for managing and developing water resources statewide for current and future generations.[15] It provides a collaborative

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[11] *State of California, Office of Governor Edmund G. Brown, Jr., Governor Brown Issues Order to Continue Water Savings as Drought Persists, May 9, 2016, available at: https://www.ca.gov/archive/gov39/2016/05/09/news19408/index.html, accessed July 6, 2021.*

[12] *State of California Office of Administrative Law, Notice of Approval of Emergency Regulatory Action, State Water Resources Control Board, Title 23, May 31, 2016, available at: https://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2016/rs2016_0029_with_adopted_regs.pdf, accessed July 6, 2021.*

[13] *California State Water Resources Control Board, Emergency Conservation Regulation, 2017, available at: https://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2016/rs2016_0029_with_adopted_regs.pdf, accessed July 6, 2021.*

[14] *State Water Resources Control Board, Resolution No. 2017-0024, available at: https://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2017/rs2017_0024.pdf, accessed July 6, 2021.*

[15] *California Department of Water Resources, California Water Plan, available at: https://water.ca.gov/Programs/California-Water-Plan, accessed July 6, 2021.*

planning framework for elected officials, agencies, tribes, water and resource managers, businesses, academia, stakeholders, and the public to develop findings and recommendations and make informed decisions for California's water future.

The plan, updated every five years, presents the status and trends of California's water-dependent natural resources; water supplies; and agricultural, urban, and environmental water demands for a range of plausible future scenarios. The Water Plan also evaluates different combinations of regional and statewide resource management strategies to reduce water demand, increase water supply, reduce flood risk, improve water quality, and enhance environmental and resource stewardship. The evaluations and assessments performed for the plan help identify effective actions and policies for meeting California's resource management objectives in the near term and for several decades to come.

In July 2019, the Department of Water Resources released the Final 2018 Update to the California Water Plan.[16] The document provides recommended actions, funding scenarios, and an investment strategy to bolster efforts by water and resource managers, planners, and decision-makers to overcome the State's most pressing water resource challenges. It reaffirms the State government's role and commitment to sustainable, equitable, long-term water resource management; and introduces implementation tools to inform decision-making. The 2018 Update recommends significant additional investment in infrastructure and ecosystem improvements to overcome challenges to sustainability; and it recommends actions to resolve systemic and institutional issues that contribute to many of the state's water challenges.[17]

California Water Action Plan

The California Water Action Plan is a roadmap for the State's journey towards sustainable water management. The first California Water Action Plan was released in January 2014 under Governor Brown's administration and updated in 2016.[18] The California Water Action Plan discusses the challenges to water in California: uncertain water supplies, water scarcity/drought, declining groundwater supplies, poor water quality, declining native fish species and loss of wildlife habitat, floods, supply disruptions, and population growth and climate change further increasing the severity of these risks.[19]

2) *Local*

City of Sierra Madre 2020 Urban Water Management Plan

The City's 2020 UWMP was adopted by the City in July 2021. The City is required to prepare a Urban Water Management Plan to comply with r Water Code Section 10610 through 1056 of the Urban Water Management Planning Act. The act requires all urban water suppliers to prepare, adopt, and file an UWMP

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[16] *California Department of Water Resources, available at: https://water.ca.gov/News/News-Releases/2019/July-19/Final-Water-Plan-Update-2018, accessed July 6, 2021.*

[17] *California Department of Water Resources, California Water Plan Update 2018, Executive Summary, pages ES-1 to ES-2, available at: https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/California-Water-Plan/Docs/Update2018/Final/California-Water-Plan-Update-2018.pdf#page=23, accessed July 6, 2021.*

[18] *California Natural Resources Agency, California Water Action Plan, available at: http://resources.ca.gov/california_water_action_plan/, accessed July 6, 2021.*

[19] *California Natural Resources Agency, California Water Action Plan 2016 Update, pages 2 and 3, available at: http://resources.ca.gov/docs/california_water_action_plan/Final_California_Water_Action_Plan.pdf, accessed July 6, 2021.*

with the California Department of Water Resources every five years. The City's 2020 UWMP outlines water demands, sources, and supply reliability to the City by forecasting water use based on climate, demographics, and land use changes within the City. The 2020 UWMP also provides demand management measures to increase water use efficiency for various land use types and details a water supplies contingency plan in case of shortage emergencies.

City of Sierra Madre Municipal Code

The City's Municipal Code contains existing standards and regulations that help mitigate potential impacts related to water supply and distribution system. The following provisions from the City of Sierra Madre's Municipal Code are applicable to the General Plan Update:

- **Section 13.04.080 (Fees for Service Connections and Installations or Extensions of Existing Distribution Mains).** This section establishes service connection fees to cover the expense of making new water connections to the City's existing water supply system.
- **Chapter 13.20 (Cross-Connection Control).** The purpose of this chapter is to protect the public water supply against actual or potential cross-connection on the premises. Section 13.20.030 outlines cross-connection protection requirements, including installation of backflow prevention devices, to ensure existing connections between drinking water systems and sources of contamination are eliminated.
- **Chapter 13.24 (Mandatory Water Conservation Plan).** The mandatory water conservation plan is to minimize the effects of a water shortage to the water customers of the City, complies with California Water Code Section 10608(a)(b), and significantly reduces the delivery and consumption of water. Section 13.20.060 details prohibited water uses to all water department customers (e.g., water used for decorative fountains must be part of a recycling system, lawn and landscaping irrigation must occur between the hours of 10 A.N. and 4 P.M., etc.). Sections 13.24.070 and 13.24.080 require 10 and 20 percent water curtailment to all water department customers by January 1, 2016, and 2021, respectively. Due to the ongoing drought and increasing state mandates for urban water conservation, it is anticipated that there will be numerous amendments to Chapter 13.24 in the coming months and years.
- **Chapter 15.52 (Public Facilities Fee).** This chapter, also known as the "Sierra Madre Public Facilities Fee Ordinance," outlines the City's Public Facilities Fee, which is required to be paid at the time building permits are issues. As stated in Section 15.52.070 (Special Fund), the fees go into a special fund, entitled the "public facilities fee fund," which are to be expended only on the installation, acquisition, construction, and improvement of eligible facilities.
- **Chapter 15.30 (Green Building Standards Code).** Adopts by reference the 2019 Green Building Standards Code, which contains requirements for indoor water use reduction and site irrigation conservation.
- **Title 15 (Buildings and Construction), Chapter 15.58 (Low Impact Development Plan).** Contains requirements for construction activities and facility operations of development and redevelopment projects to comply with the current "municipal NPDES permit," lessen the water quality impacts of development, and integrate LID design principals to mimic predevelopment hydrology through infiltration, evapotranspiration, and rainfall harvest use.
- **Chapter 15.60 (Water Efficient Landscape Ordinance).** The chapter establishes landscape design and plant, irrigation, soil, and grading requirements to encourage the appropriate design,

installation, maintenance, and management of landscapes so that water demand can be decreased, runoff can be retained, and flooding can be reduced without a decline in the quality or quantity of landscapes. The April 1, 2015 Executive Order issued by Governor Jerry Brown requires urban water suppliers to update their water efficient landscape ordinances in order to enhance conservation and to specifically limit the planting of turf grass.

City of Sierra Madre 2015 General Plan

The following are relevant policies and implementation measures of the Sierra Madre General Plan and Implementation Program.

General Plan Policies

Land Use Element

- Policy L1.6: Require that new residential development, substantial remodeling and additions comply with all adopted water conservation measures that reduce and minimize the impact on the City's water supply and it ability to serve its water customers.
- Policy L4.3: Ensure that new development and the expansion of existing uses incorporate water conservation measures that reduce and minimize the impact on the City's water supply and its ability to serve its customers.
- Policy L8.2: Incorporate water conservation measures in the zoning development standards for new construction and substantial remodeling or building expansion, including but not limited to green building construction, the percentage of permeable ground surfaces, building floor area limitation, lot coverage, landscaping and irrigation, greywater plumbing requirements, rainwater capture, and design review.
- Policy L8.3: Consider a water impact fee to apply to new residential dwelling units and additions to existing development that increase water consumption, to fund water fixture retrofits of existing homes and other water conservation measures.

Resource Management Element

- Policy R12.1: Protect settling basins for water collection for the purposes of groundwater recharge.
- Policy R12.2: Actively follow state legislative and policy actions to ensure that Sierra Madre is able to use all of its water through the conservation of lands for groundwater recharge and storm water management.
- Policy R12.3: Develop new ways to capture and percolate storm water.
- Policy R12.4: Identify ways in which reclaimed water can be utilized in Sierra Madre.
- Policy R12.5: Work collaboratively with Los Angeles County Department of Public Works/Flood Control to utilize existing debris basins for groundwater recharge.
- Policy R13.1: Charge water usage fees which anticipate capital improvement needs.
- Policy R13.2: Maintain a capital plan for the maintenance of the City's water facilities.

- Policy R14.1: Maintain an Urban Water Management Plan.
- Policy R14.2: Evaluate water availability in conjunction with public and private development projects.
- Policy R15.1: Prohibit washing of concrete surfaces such as sidewalks and driveways with a hose.
- Policy R15.2: Regulate water used for decorative fountains.
- Policy R15.3: Require restaurants to limit use of drinking water.
- Policy R15.4: Restrict hours of water usage for landscape and irrigation.
- Policy R15.5: Explore other methods or innovations to conserve water during times of drought and implement as necessary.
- Policy R15.6: Consider a rate structure that encourages the efficient use of water and that does not discriminate unfairly against those with larger lots.
- Policy R16.1: Work with Raymond Basin Management Board (Watermaster) to improve management of the Eastern Unit of the Raymond Basin.
- Policy R16.2: Collaborate with other Raymond Basin water producers, especially the City of Arcadia, to eliminate the overdraft of the Raymond Basin.
- Policy R17.1: Diligently carry out minimum control measures and source reduction programs as required and/or is beneficial to water quality.
- Policy R17.2: Continue to identify programs or projects with multiple benefits with water quality, water retention, recreation, flood safety, and aesthetics as priorities.
- Policy R17.3: Continue to work with regional partners to increase efficiency, effectiveness, and cost savings as priorities.
- Policy R17.4: Participate in the discussion regarding emerging regulatory National Pollutant Discharge Elimination System topics, and provide comments as necessary.
- Policy R17.5: Develop public education and outreach programs with regard to specific City and regional topics.

Community Services Element

- Policy C31.2: Provide for the maintenance of existing water, sewer, and storm drainage systems.
- Policy C31.2: Require that new development be contingent upon the ability to be served by adequate sanitation collection and treatment, water, electrical and natural gas energy, telecommunications, storm drainage, and other supporting infrastructure.

Implementation Program Measures

Land Use Implementation Program

- Measure IM-3: The City shall amend the Municipal Code as necessary to include a requirement for compliance with all adopted water conservation measures.

Public Services Implementation Program

- Measure IM-1: The City shall review and amend as necessary Titles 15 (Buildings and Construction), 16 (Subdivisions), and 17 (Zoning) of the Municipal Code to require that all proposed development be provided with adequate water, sewer, drainage, electrical, and telecommunications systems to meet the demands of the project.

3. ENVIRONMENTAL IMPACTS AND MITIGATIONS

A. Threshold of Significance

Appendix G of the CEQA Guidelines provides thresholds address impacts related to water infrastructure. Specifically, the Guidelines state that the proposed project may have an adverse significant water infrastructure impact if it would:

a) Require or result in the relocation or construction of new or expanded water facilities, the construction or relocation of which could cause significant environmental effects; or
b) [Not] have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.

B. Project Impacts and Mitigation Measures

Impact L-1: Would the project require or result in the relocation or construction of new or expanded water facilities, the construction or relocation of which could cause significant environmental effects?

Impact Analysis:

The 2015 General Plan EIR determined that existing water delivery systems are adequate to meet the need of future development that would be accommodated by the 2015 General Plan Update. There are no deficiencies in the City's water delivery system and no deficiencies would occur with implementation of the 2015 General Plan Update. In addition, pursuant to Chapter 15.52 (Public Facilities Fee) of the City's Municipal Code, costs for the City's water delivery system are funded by the City's Public Facilities Fee that all new development within the City, including development that would be supported by the 2015 General Plan Update, is required to pay at the time of building permit issuance. Pursuant to Section 13.04.080 (Fees for Service Connections and Installations or Extensions of Existing Distribution Mains) of the City's Municipal Code, future development would also be required to pay service connection fees to cover the expense of making new water connections to the existing water supply main. Furthermore, the General Plan Update and Implementation Program contain policies and implementation measures to ensure adequate water delivery systems. As such, the 2015 General Plan EIR found that implementation of the 2015 General Plan Update would not significantly impact water delivery infrastructure.

The project proposes land use designation changes, rezoning, and updates to the General Plan Land Use, Safety, and Circulation Elements. The update to the Land Use Element includes establishing two new multi-family residential land use categories (R-3-20 and R-3-30), creating an Affordable Housing Overlay on select congregational sites, along with minor changes to the Land Use table and map to accommodate residential land uses on the sites identified to meet the RHNA allocation. The update to the Safety Element includes policies related to limiting risk from wildfire, including avoiding development in Very High Fire Hazard Severity Zones (VHFHSZ), updating maps related to fire hazards, and developing a Vegetation Management Program. The update to the Circulation Element includes minor updates to the existing setting and a policy update related to the City's adoption of VMT thresholds.

Changes in land use designations, rezoning, and updates to the Land Use Element would result in an increase in residential units and an associated increase in residential population within the city. Such increases would create an increased demand on the existing water delivery infrastructure. However, the City's existing water delivery infrastructure meets flow requirements for water demand, including fire flow requirements.[20] New development within the City, including development that would be supported by the project, would require installation of onsite distribution infrastructure, such as supply lines and meters, however these would be installed as part of normal building construction. Some new development may also require offsite upgrades, such as new or expanded water mains in adjacent streets and/or additional fire hydrants. Such improvements would be conducted in coordination with the City in order to avoid impacts to water service to adjacent uses and, as with development analyzed under the 2015 General Plan EIR, would also be funded by Public Facilities Fees.

Updates to the Safety Element would serve to reduce the city's risks from wildfire and primarily involves limitations on the types of developments within areas of increased fire hazards and vegetation maintenance and would not have the potential to impact water delivery infrastructure within the city.

Updates to the Circulation Element are primarily ministerial and pertain to the city's approach for analyzing transportation-related environmental impacts and would not have the potential to impact water delivery infrastructure within the city.

Based on the above, no new significant impacts related to water delivery infrastructure would occur as a result of the project and, as with the 2015 General Plan EIR, impacts would be less than significant.

Mitigation Measures:

None required.

Impact L-2: Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?

Impact Analysis:

The 2015 General Plan EIR determined that the minor increase in land uses under the 2015 General Plan Update would not adversely affect the City's water supply. In addition, the City has a number of conservation measures, including the City's Mandatory Water Conservation Plan (Chapter 13.24 of the City's Municipal Code). Future development would be required to comply with the City's Water Efficient Landscape Ordinance (Chapter 15.60 of the City's Municipal Code), Low Impact Development Ordinance (integrated within Section 15.04.070 [Stormwater Retention] of the City's Municipal Code), and provisions of the Green Building Standards Code (adopted by reference in Chapter 15.30 [Green Building Standards Code] of the City's Municipal Code). Furthermore, the 2015 General Plan Update and Implementation Program includes policies and implementation measures related to water conservation and designed to sustain Sierra Madre's ability to be self-sufficient in supplying water from its traditional sources. However, although the 2010 UWMP indicates sufficient water supplies, the severity and uncertain duration of

[20] *Email communication between Jose Reynoso, Director of Utility Services, and Vincent Gonzales, Director of Planning & Community Preservation, City of Sierra Madre, June 21, 2021.*

California's recent drought conditions makes water supply unreliable. Therefore, water supply impacts were found to be potentially significant under buildout of the 2015 General Plan Update.

The project proposes land use designation changes, rezoning, and updates to the General Plan Land Use, Safety, and Circulation Elements. The update to the Land Use Element includes establishing two new multi-family residential land use categories (R-3-20 and R-3-30), creating an Affordable Housing Overlay on select congregational sites, along with minor changes to the Land Use table and map to accommodate residential land uses on the sites identified to meet the RHNA allocation. The update to the Safety Element includes policies related to limiting risk from wildfire, including avoiding development in Very High Fire Hazard Severity Zones (VHFHSZ), updating maps related to fire hazards, and developing a Vegetation Management Program. The update to the Circulation Element includes minor updates to the existing setting and a policy update related to the City's adoption of VMT thresholds.

Changes in land use designations, rezoning, and updates to the Land Use Element would result in an increase in residential units and an associated increase in residential population within the city. Such increases would create an increased demand for water supplies within the City. **Table IV.L.1-2, Total Water Demands Projections Under the Project**, presents the estimated additional water demand within the City under buildout of the project.

Table IV.L.1-2
Total Water Demands Projections Under the Project

Land Use	Demand Rate (gal/cap/day) [1]	Total Demand (gal/day)
483 Persons [2]	199	96,117

Notes:
gal/cap/day = gallons per capita per day
1 Source: City of Sierra Madre, Department of Public Works, Water Division, 2020 Urban Water Management Plan, July 2021, page 4-14.
*2 See **Section IV.I, Population and Housing**, of this Draft SEIR.*

As shown in Table IV.L.1-2, buildout of the project would result in an additional water demand in the City of 96,117 gpd, or 107.7 AFY. Based on the lowest amount of water supply projected for normal years (2,487 AFY), single dry years (2,331 AFY), and multiple dry years (2,210 AFY), the increased water demand resulting from buildout that would be supported by the project would represent 4.3 percent of water supplies during normal years, 4.6 percent of water supplies during single dry years, and 4.9 percent of water supplies available during multiple dry years. Therefore, the amount of new water demand that could occur under the project would be insignificant relative to available supplies through 2045.

In addition, as detailed in the City's 2020 UWMP, Sierra Madre would be able to meet the projected future demand for water for normal years through 2045. It should be noted that projected populations in the City's service area contained within the 2020 UWMP assumed a population within the City for the horizon year of 2045 of 10,983 persons and as detailed, in Section IV.I, Population and Housing, of this Draft SEIR, buildout of the project could result in a total population within the City of 11,299 persons, an additional 316 persons (2.9 percent). However, an additional 316 persons would not be a significant increase in population or result in a significant increase in water demand and, as also detailed in Section IV.I, the potential population increase that would occur within the City would be consistent with Southern California Association of Governments (SCAG)'s Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS) projections for the City. In general, projects that conform to the demographic projections from SCAG's RTP/SCS are considered to have been included in water supply planning efforts. Because projected populations in the City's service area the City's 2020 UWMP were based on growth

rate projections obtained from data provided by SCAG, it is assumed that growth that would occur under the project was accounted for within the projections of future water demand. Therefore, projected water supplies would meet projected demands within the City, including those of potential future growth under the project.

Furthermore, the City has implemented numerous demand management measures and regulations/requirements in the form of ordinances, codes, and policies designed to reduce the overall per capita water demand within the city including: the Mandatory Water Conservation Ordinance (Ordinance No. 1322) that includes staged levels of water use prohibitions; individual metering for residential, commercial, industrial, large landscape, and institutional/governmental facilities; tiered pricing of water rates; public education and outreach; assessment and management of water loss from the distribution system; coordination and staffing of water conservation program; residential programs including water surveys, rain barrels and cisterns, turf removal, plumbing retrofit kits, ultra-low flush toilet replacement, and high efficiency washing machine rebates. The City has also upgraded to Automated Metering Infrastructure, which allows water customers to check consumption daily. This allows customers to receive feedback on their conservation efforts as well as detect leaks. Prior to adoption of Ordinance No. 1322, the City's water use rate ranged from approximately 224 gallons per capita day to 308 gallons per capita day (from FY 1998-99 through FY 2007-08). The City's actual water use rate during FY 2019-20 was 199 gallons per capita per day which is a decrease of up to 109 gallons per capita per day from the recent historical water use.[21] As a result, the City has been able to provide sufficient water supplies to its customers, including during long-term droughts and years with historically high water demands as well as water service to meet maximum day water demands for these years, including during the summer months.

In addition, the City has pursued water supply/groundwater replenishment projects and implemented contingency planning (cyclic storage agreement, emergency interconnections, joint well partnership within the Main Basin, and well rehabilitation) to ensure that the city has a reliable source of supply over the 2020 UWMP planning period under normal, single year dry, and multiple year dry periods. Furthermore, as with development that would occur under the 2015 General Plan Update, development that would occur under the project would also be required to comply with the city's Water Efficient Landscape Ordinance (Chapter 15.60 of the City's Municipal Code) and the Low Impact Development Ordinance (integrated within Section 15.04.070 [Stormwater Retention] of the City's Municipal Code), which assist in water conservation efforts associated with development and redevelopment, as well as the provisions of the Green Building Standards Code (adopted by reference in Chapter 15.30 [Green Building Standards Code] of the City's Municipal Code) which contains requirements for indoor water use reduction and site irrigation conservation. As such, it is unlikely that development that would occur under the project would increase the city's water demand beyond available supplies.

Updates to the Safety Element would serve to reduce the City's risks from wildfire and primarily involves limitations on the types of developments within areas of increased fire hazards and vegetation maintenance and would not have the potential to impact water supplies within the city.

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[21] *Source: City of Sierra Madre, Department of Public Works, Water Division, 2020 Urban Water Management Plan, July 2021, page 4-14.*

Updates to the Circulation Element are primarily ministerial and pertain to the city's approach for analyzing transportation-related environmental impacts and would not have the potential to impact water supplies within the city.

Based on the above, no new significant impacts related to water supplies would occur as a result of the project and impacts would be less than significant. This impact would be less than the findings of the 2015 General Plan EIR. However, the mitigation measures included within the 2015 General Plan EIR would still apply to the project.

Mitigation Measures:

UT-1: GP EIR MM 13-1. The City of Sierra Madre shall apply the city's water conservation measures and policies (including those of the General Plan Update) to all development proposals (new development and redevelopment) and encourage water conservation in construction and landscape design.

UT-2: GP EIR MM 13-2. The City of Sierra Madre shall promote energy efficiency and water conservation upgrades to existing non-residential buildings at the time of major remodel or additions.

UT-3: GP EIR MM 13-3. The City of Sierra Madre shall evaluate development proposals (new development and redevelopment) for consistency with the 2019 Green Building Standards Code (adopted by reference in Chapter 15.30 [Green Building Standards Code] of the City's Municipal Code.

UT-4: GP EIR MM 13-4. The City of Sierra Madre shall evaluate development proposals (new development and redevelopment) for consistency with the city's Water Efficient Landscape Ordinance (Chapter 15.60 of the city's Municipal Code) and Low Impact Development Ordinance (integrated within Section 15.04.070 [Stormwater Retention] of the city's Municipal Code) to ensure that development proposals incorporate all necessary and feasible water conservation and retention measures.

UT-5: GP EIR MM 13-5. The City of Sierra Madre shall require that all development proposals (new development and redevelopment) demonstrate a sufficient and sustainable water supply (i.e., provision of a "will serve" letter from the city's Water Division) prior to approval of the development proposal, consistent with the requirement of the city's Water Division.

UT-6: GP EIR MM 13-6. The City of Sierra Madre shall encourage project applicants/developers of development proposals (new development and redevelopment), where feasible, to retain stormwater for onsite use and thereby offset the use of other water sources.

UT-7: GP EIR MM 13-7. The City of Sierra Madre shall monitor development growth and coordinate with the city's Water Division to ensure that long-range needs for potable water will be met.

UT-8: GP EIR MM 13-8. If water supplies are reduced from projected levels due to drought, emergency, or other unanticipated events, the City of Sierra Madre shall take appropriate steps to limit, reduce, or otherwise modify growth permitted by the General Plan Update in consultation with the city's Water Division to ensure adequate long-term supply for existing businesses and residents.

UT-9: GP EIR MM 13-9. The City of Sierra Madre shall conduct a periodic assessment of the city's water conservation measures and policies based on water supply changes, droughts, and environmental issues (e.g. contamination of potable water).

UT-10: GP EIR MM 13-10. The City of Sierra Madre shall promote programs for retrofitting plumbing, providing cost rebates, identifying leaks, changing landscaping, irrigating efficiently and other methods of reducing water consumption by existing users.

UT-11: GP EIR MM 13-11. The City of Sierra Madre shall assess the water use by city buildings and facilities (e.g. City Hall, parks) and reduce water consumption to the maximum extent practicable.

UT-12: GP EIR MM 13-12. The City of Sierra Madre shall develop an information sharing program in cooperation with the city's Water Division to make appropriate data available to the public pertaining to water supply and water use in Sierra Madre.

4. LEVEL OF SIGNIFICANCE AFTER MITIGATION

With implementation of policies within the General Plan Update, all impacts to water distribution infrastructure would be less-than significant and no mitigation measures are necessary. With implementation of mitigation measures UT-1 through UT-12, impacts to water supplies would be less than significant. As with development that would occur under the 2015 General Plan, implementation of these mitigation measures would help reduce impacts on water supply as a result of future development that would be accommodated by the project.

IV. ENVIRONMENTAL IMPACT ANALYSIS
L.2 UTILITIES – WASTEWATER

1. INTRODUCTION

This section of the SEIR analyzes the potential environmental effects related to police protection services from implementation of the proposed project. Information in this section is based in part on the city's 2014 Sewer System Management Plan (SSMP).[22]

A. 2015 General Plan EIR Analysis and Conclusions

The 2015 General Plan EIR determined that because wastewater generated within the city is discharged via the Sanitation Districts regional trunk lines to the Whittier Narrows Water Reclamation Plant (WNWRP) and because the WNWRP is required by federal and state law to meet applicable standards of treatment under its National Pollutant Discharge Elimination System (NPDES) permit, implementation of the 2015 General Plan Update would not impede the Sanitation Districts' ability to continue to meet its wastewater treatment requirements. As such, the 2015 General Plan EIR found that impacts related to wastewater treatment requirements would not be significant.

The 2015 General Plan EIR determined that the WNWRP would have more than adequate capacity to treat the additional wastewater that could be generated by additional development that would be supported by the 2015 General Plan Update. In addition, the estimated wastewater that would be generated by additional development under the 2015 General Plan Update would be adequately handled by the city's wastewater collection facilities. As such, the 2015 General Plan EIR found that implementation of the 2015 General Plan Update would not significantly impact wastewater collection and treatment systems.

2. ENVIRONMENTAL SETTING

A. Existing Conditions

1) *Wastewater Collection System*

The City of Sierra Madre does not have wastewater treatment capacity or facilities, only a wastewater collection system. The system is primarily comprised of pipelines eight inches in diameter or less, and is managed, operated, and maintained by the City's Sewer Division, a division within the Sierra Madre Public Works Department and Los Angeles County, who owns a small portion. The wastewater collection system is connected to and discharges to sewer mains in the City of Arcadia and to Los Angeles County Sanitation Districts (Sanitation Districts) trunk mains in Baldwin Avenue, Sierra Madre Boulevard, and East Orange Grove Avenue.

According to the city's SSMP, there are a total of 747 sewer manholes, 32 miles of 6-inch and 8-inch sewer lines, and 3,248 lateral connections in the city's existing sewer system. Sewer structural defects and

[22] *City of Sierra Madre, Department of Public Works, Sewer Division, Sewer System Management Plan, August 2014.*

deficiencies in the city's wastewater collection system are also identified and prioritized by critical defectiveness. Currently, there are no plans to expand the city's wastewater collection facilities.

Additionally, there remain a few scattered neighborhoods in Sierra Madre that are not served by public sewers, and instead are served by septic systems. These include:

- Mt. Wilson Trail (private street)
- Auburn Avenue above Auburn Debris Basin
- West Bonita Avenue, north side, west of mid-block to Hermosa Street
- Webster Way
- East Alegria Avenue, mid-block to Baldwin Avenue

Sewer system expansions in Sierra Madre have historically been funded either by developers of housing tracts or by the formation of assessment districts. The city's Sewer Division, does not fund construction of new infrastructure.

2) *Wastewater Treatment Facility*

Under contract with the city, the Sanitation Districts provide treatment and disposal of wastewater generated in the city. The Sanitation Districts operate 11 wastewater treatment facilities, 10 of which are classified as water reclamation plants; all of the Sanitation Districts wastewater treatment facilities are regulated under a National Pollutant Discharge Elimination System (NPDES) permit. These 11 facilities serve approximately 800 square-miles in 78 cities and unincorporated areas within Los Angeles County; including the City of Sierra Madre. Effluent quality from the WRPs ranges from disinfected secondary to filtered, disinfected tertiary.

The wastewater from the city's service area, which is estimated at approximately 0.7 million gallons per day (mgd),[23] primarily flows to (via the city's wastewater collection system and Sanitation Districts regional trunk lines) and receives tertiary treatment at WNWRP located in South El Monte. The WNWRP, which is owned and operated by the Sanitation Districts, is regulated under NPDES Permit No. CA0053716, issued by the Los Angeles Regional Water Quality Control Board (LARWQCB) in 2014 under Order No. R4-2014-0213 (Order). The Order was amended in 2015 by Order No. R4-2014-0213-A01, which serves as a permit under NPDES. An application for reissuance of the NPDES was submitted in 2019 and was deemed complete. The terms and conditions of the 2014 NPDES order, as amended, have been automatically continued and remain in effect until new waste discharge requirements and NPDES permit are adopted.

The WNWRP has a treatment capacity of approximately 15 mgd and provides coagulated, filtered, and disinfected tertiary effluent. WNWRP receives wastewater (which is a mixture of residential, commercial, and industrial wastewater) from the cities of Alhambra, Arcadia, Azusa, Bradbury, Industry, Duarte, El Monte, Glendale, Irwindale, La Cañada Flintridge, Los Angeles, Monrovia, Monterey Park, Pasadena, Rosemead, San Gabriel, San Marino, Sierra Madre, South El Monte, South Pasadena, and Temple City. The WNWRP is estimated to receive approximately 8,000 acre-feet of wastewater per year. Approximately 99 percent of the reclaimed water is beneficially reused, mostly for groundwater replenishment and

[23] *City of Sierra Madre, Department of Public Works, Water Division, 2020 Urban Water Management Plan, July 2021, page 6-40.*

landscape irrigation. Treated recycled water that is not used is discharged to the San Gabriel River/Rio Hondo and eventually flows into the Pacific Ocean.

3) *Housing Element Project Sites*

Site 1

Site 1 includes nine parcels along Mariposa Avenue and Lima Street that are currently developed with single- and multi-family residential uses. Site 1 is currently served by existing onsite wastewater collection infrastructure.

Site 2

Site 2 includes ten parcels along Suffolk Avenue and Baldwin Avenue developed with older multi-family development. Site 2 is currently served by existing onsite wastewater collection infrastructure.

Site 3

Site 3 includes one parcel along Sierra Madre Boulevard that is currently developed with four older multi-family residential buildings, open space, and parking areas. Site 3 is currently served by existing onsite wastewater collection infrastructure.

Site 4

Site 4 includes one parcel along N. Baldwin Avenue that is currently developed with a single-family residence. Site 4 is currently served by existing onsite wastewater collection infrastructure.

Site A

Site A is located on the parking area of St. Rita Catholic Church. Because no land uses requiring wastewater collection are currently located on Site A, the site may not be currently served by existing onsite wastewater collection infrastructure. However, given the developed conditions of the surrounding area, it is likely that existing offsite wastewater trunk lines are available for connection.

Site B

Site B is located in the parking area of the United Methodist Church. Because no land uses requiring wastewater collection are currently located on Site B, the site may not be currently served by existing onsite wastewater collection infrastructure. However, given the developed conditions of the surrounding area, it is likely that existing offsite wastewater trunk lines are available for connection.

Site C

Site C is located on the parking area of the Old North Church. Because no land uses requiring wastewater collection are currently located on Site C, the site may not be currently served by existing onsite wastewater collection infrastructure. However, given the developed conditions of the surrounding area, it is likely that existing offsite wastewater trunk lines are available for connection.

Site D

Site D is located on asphalt play areas and the parking area of the Bethany Church and School. Because no land uses requiring wastewater collection are currently located on Site D, the site may not be currently served by existing onsite wastewater collection infrastructure. However, given the developed conditions of the surrounding area, it is likely that existing offsite wastewater trunk lines are available for connection.

B. Regulatory Setting

1) *Federal and State*

National Pollutant Discharge Elimination System

Under the NPDES program promulgated under Section 402 of the Clean Water Act, which is overseen by the U.S. Environmental Protection Agency (EPA), all facilities that discharge pollutants from any point source into the waters of the United States are required to obtain a NPDES permit. In California, the SWRCB and local Regional Water Quality Control Boards (RWQCB) have assumed the responsibility of implementing the NPDES permit program. Wastewater treatment plants, which are direct point-source discharges (that is, facilities that discharge sources directly to receiving waters), are required by the EPA to meet applicable standards of treatment plant discharge requirements. Specifically, they are regulated under NPDES permits, which are issued by the RWQCBs. The NPDES permit regulated the amount and type of pollutants that the wastewater treatment plants can discharge into receiving waters.

California Green Building Code

The California Green Building Standards Code, commonly referred to as the CALGreen Code, is set forth in California Code of Regulations Title 24, Part 11, and establishes voluntary and mandatory standards pertaining to the planning and design of sustainable site development and water conservation, among other issues. Under the CALGreen Code, all flush toilets are limited to 1.28 gallons per flush, and urinals are limited to 0.5 gallon per flush. In addition, maximum flow rates for faucets are established at: 2.0 gallons per minute (gpm) at 80 pounds per square inch (psi) for showerheads; 1.2 gpm at 60 psi for residential lavatory faucets; and 1.8 gpm at 60 psi for kitchen faucets.

2) *Local*

City of Sierra Madre Sewer System Management Plan

The city's SSMP was updated in August 2014 and was prepared in compliance with statewide executive orders issued by the SWRCB. The SSMP sets goals and actions to ensure the city's sewer system is adequately maintained, repaired, replaced, and expanded. The SSMP also includes a response plan to potential sewer system overflow occurrences within Sierra Madre, including reporting obligations. Additionally, the plan also outlines operation and maintenance, and design and performance provisions, as well as the city's fats, oil, and grease source control program, system evaluation and capacity assurance plan, and monitoring, measurement, and modification program.

City of Sierra Madre Municipal Code

The city's Municipal Code contains existing standards and regulations that help mitigate potential impacts related to wastewater treatment and collection systems. The following provisions from the Municipal Code are applicable to the project:

- **Chapter 13.08 (Sewer System), Section 13.08.070 (Connection Charges).** Requires any person desiring to connect to the city's sewer system to apply for a permit and pay a connection charge. The funds from the connection charges are placed in the sewer fund and are required to be used only for the acquisition, construction, reconstruction, maintenance, and operation of sanitation or sewerage facilities, and to repay principal and interest on bonds or federal or state loans issues for the construction and reconstruction of such sewerage facilities.
- **Chapter 13.12 (Sanitary Sewers).** Also known as the Sanitary Sewer Ordinance, this chapter requires all plumbing fixtures to connect to the city's public sewer system.
- **Chapter 13.14 (Fats, Oils, and Grease Ordinance).** Ensures proper maintenance of the city's sewer services and facilities by prohibiting discharge of fats, oils, and grease (FOG) to the public sewer to prevent potential sewer line blockages. Section 13.14.060 establishes the city's FOG control program in order to minimize sanitary sewer overflow. Grease interceptors and trap requirements, and cleanup, monitoring, and reporting details are also included in Chapter 13.14.
- **Chapter 15.52 (Public Facilities Fee).** This chapter, also known as the "Sierra Madre Public Facilities Fee Ordinance," outlines the city's public facilities fee, which is required to be paid at the time building permits are issued. As stated in Section 15.52.070 (Special Fund), the fees go into a special fund, entitled the "public facilities fee fund," which are to be expended only on the installation, acquisition, construction, and improvement of eligible facilities.

City of Sierra Madre 2015 General Plan

The following are relevant policies and implementation measures of the Sierra Madre General Plan and Implementation Program.

General Plan Policies

Community Services Element

- Policy C31.2: Provide for the maintenance of existing water, sewer, and storm drainage systems.
- Policy C31.3: Require that new development be contingent upon the ability to be served by adequate sanitation collection and treatment, water, electrical and natural gas energy, telecommunications, storm drainage, and other supporting infrastructure.

Implementation Program Measures

Public Services Implementation Program

- Measure IM-1: The City shall review and amend as necessary Titles 15 (Buildings and Construction), 16 (Subdivisions), and 17 (Zoning) of the Municipal Code to require that all

proposed development be provided with adequate water, sewer, drainage, electrical, and telecommunications systems to meet the demands of the project.

3. ENVIRONMENTAL IMPACTS AND MITIGATIONS

A. Threshold of Significance

Appendix G of the CEQA Guidelines provides thresholds address impacts related to wastewater collection and treatment facilities. Specifically, the Guidelines state that the proposed project may have an adverse significant wastewater collection and treatment facilities impact if it would:

a) Require or result in the relocation of construction of new or expanded wastewater treatment facilities, the construction or relocation of which could cause significant environmental effects; or

b) Result in a determination by the wastewater treatment provider that is has [in]adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

B. Project Impacts and Mitigation Measures

Impact L-3: Would the project require or result in the relocation of construction of new or expanded wastewater treatment facilities, the construction or relocation of which could cause significant environmental effects?

Impact Analysis:

The 2015 General Plan EIR determined that because wastewater generated within the city is discharged via the Sanitation Districts regional trunk lines to the Whittier Narrows Water Reclamation Plant (WNWRP) and because the WNWRP is required by federal and state law to meet applicable standards of treatment under its NPDES permit, implementation of the 2015 General Plan Update would not impede the Sanitation Districts' ability to continue to meet its wastewater treatment requirements. As such, the 2015 General Plan EIR found that impacts related to wastewater treatment requirements would not be significant.

The 2015 General Plan EIR determined that the WNWRP would have more than adequate capacity to treat the additional wastewater that could be generated by additional development that would be supported by the 2015 General Plan Update. In addition, the estimated wastewater that would be generated by additional development under the 2015 General Plan Update would be adequately handled by the city's wastewater collection facilities. Any expansions or extensions of existing wastewater collection facilities that would be required by individual developments would be constructed and paid for by the project applicants as part of their conditions of approval. In addition, pursuant to Chapter 15.52 (Public Facilities Fee) of the City's Municipal Code, costs for the City's wastewater collection system are funded by the City's Public Facilities Fee that all new development within the City, including development that would be supported by the 2015 General Plan Update, is required to pay at the time of building permit issuance. Pursuant to Section 13.08.070 (Connection Charges) of the City's Municipal Code, future development would also be required to pay sewer connection charges, part of which fund construction and maintenance of the city's wastewater collection system. Future development would also be subject to Chapter 13.14 (Fats, Oils, and Grease Ordinance) of the city's Municipal Code which prohibits discharges

of substances that cause blockages to the public sewer. Furthermore, the General Plan Update and Implementation Program contain policies and implementation measures to ensure the city's wastewater collection system is adequately maintained, repaired, replaced, and expanded. As such, the 2015 General Plan EIR found that implementation of the 2015 General Plan Update would not significantly impact wastewater collection and treatment systems.

The project proposes land use designation changes, rezoning, and updates to the General Plan Land Use, Safety, and Circulation Elements. The update to the Land Use Element includes establishing two new multi-family residential land use categories (R-3-20 and R-3-30), creating an Affordable Housing Overlay on select congregational sites, along with minor changes to the Land Use table and map to accommodate residential land uses on the sites identified to meet the RHNA allocation. The update to the Safety Element includes policies related to limiting risk from wildfire, including avoiding development in Very High Fire Hazard Severity Zones (VHFHSZ), updating maps related to fire hazards, and developing a Vegetation Management Program. The update to the Circulation Element includes minor updates to the existing setting and a policy update related to the City's adoption of VMT thresholds.

Changes in land use designations, rezoning, and updates to the Land Use Element would result in an increase in residential units and an associated increase in residential population within the city. Such increases would generate additional wastewater that would need to be conveyed within the local wastewater collection infrastructure. Table IV.L.2-1, Projected Wastewater Generation Under the Project, presents the estimated increase in wastewater that would be generated under buildout that would be supported by the project.

Table IV.L.2-1
Projected Wastewater Generation Under the Project

Land Use	Generation Rate (gal/cap/day) [1]	Total Demand (gal/day)
483 Persons [2]	69	33,327

Notes:
gal/cap/day = gallons per capita per day
1 Sanitation Districts estimates approximately 69 gallons per person per day of wastewater is generated within LACSD's service area. Source: City of Sierra Madre, Department of Public Works, Water Division, 2020 Urban Water Management Plan, July 2021, page 6-40.
*2 See **Section IV.I, Population and Housing**, of this Draft SEIR.*

As shown in Table IV.L.2-1, development that could occur under the project would increase the amount of wastewater generated within the City by 33,327 gallons per day, an increase over the existing 0.7 mgd generation of 4.8 percent. Accordingly, the increase in wastewater generation would not represent a substantial increase into the local wastewater conveyance system. In addition, not all of this wastewater would flow into the same infrastructure in adjacent streets as the potential development sites identified for future development under the project are scattered throughout the City. In addition, as with development that would be supported by the 2015 General Plan Update, future development that would be supported by the project would be adequately handled by the city's wastewater collection infrastructure. Development impacts to local wastewater collection facilities would be evaluated on a case-by-case basis and any deficiencies within the system would be required to be addressed by the project applicant as a condition of approval. New development within the City, including development that would be supported by the project, would require installation of onsite wastewater conveyance infrastructure, such as plumbing lines, however these would be installed as part of normal building

construction. Some new development may also require offsite upgrades, such as expansion or extension of existing wastewater collection infrastructure in adjacent streets. Such improvements would be conducted in coordination with the city and, as with development analyzed under the 2015 General Plan EIR, would also be funded by Public Facilities Fees. Future development within the city would also continue to be subject to the prohibitions of Chapter 13.14 (Fats, Oils, and Grease Ordinance) of the city's Municipal Code in order to prevent the discharge of blockages within the city's sewer system.

Additional wastewater generated by future development that would be supported by the project would also require treatment by the WNWRP. The additional wastewater would represent an increase of 4.8 percent of the wastewater from the City currently treated by the WNWRP and, based on the WNWRP's treatment capacity of approximately 15 mgd, potential future development that could occur under buildout of the project would represent approximately 0.2 percent of the daily treatment capacity available to the City. Accordingly, the increase in wastewater that would be treated by the WNWRP would not be substantial and would not require new or expanded wastewater treatment infrastructure.

Updates to the Safety Element would serve to reduce the city's risks from wildfire and primarily involves limitations on the types of developments within areas of increased fire hazards and vegetation maintenance and would not have the potential to impact wastewater collection or treatment infrastructure.

Updates to the Circulation Element are primarily ministerial and pertain to the city's approach for analyzing transportation-related environmental impacts and would not have the potential to impact wastewater collection or treatment infrastructure.

Based on the above, no new significant impacts related to wastewater collection or treatment infrastructure would occur as a result of the project and, as with the 2015 General Plan EIR, impacts would be less than significant.

Mitigation Measures:

None required.

Impact L-4: Would the project result in a determination by the wastewater treatment provider that is has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Impact Analysis:

As detailed above, additional wastewater generated by future development that would be supported by the project would not represent a substantial increase over the existing wastewater generated in the City nor would it represent a substantial amount of the treatment capacity of the WNWRP. The additional wastewater would represent an increase of 4.8 percent of the wastewater from the City currently treated by the WNWRP and, based on the WNWRP's treatment capacity of approximately 15 mgd, potential future development that could occur under buildout of the project would represent approximately 0.2 percent of the daily treatment capacity available to the City. Accordingly, potential future development that could occur under the project would result in a determination by the wastewater treatment provider (WNWRP) that is has adequate capacity to serve the project.

Updates to the Safety Element would serve to reduce the city's risks from wildfire and primarily involves limitations on the types of developments within areas of increased fire hazards and vegetation maintenance and would not have the potential to impact wastewater treatment infrastructure.

Updates to the Circulation Element are primarily ministerial and pertain to the city's approach for analyzing transportation-related environmental impacts and would not have the potential to impact wastewater treatment infrastructure.

Based on the above, no new significant impacts related to wastewater treatment infrastructure would occur as a result of the project and, as with the 2015 General Plan EIR, impacts would be less than significant.

Mitigation Measures:

None required.

4. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Similar to the findings of the 2015 General Plan EIR, all impacts would be less-than significant. No mitigation measures are necessary.

IV. ENVIRONMENTAL IMPACT ANALYSIS
L.3 UTILITIES – STORMWATER

1. INTRODUCTION

This section of the SEIR analyzes the potential environmental effects related to stormwater infrastructure from implementation of the proposed project. Information in this section is based in part on the 2015 Sierra Madre General Plan EIR.

A. 2015 General Plan EIR Analysis and Conclusions

The 2015 General Plan EIR determined that future development in accordance with the 2015 General Plan Update would not allow for a substantial increase in impervious surface areas and associated runoff given the built-out nature of the city and development within the city would be subject to the runoff, retention, and reuse requirements of the NPDES permit and the city's Municipal Code. As such, the 2015 General Plan EIR found that impacts to storm drain infrastructure would not be significant.

2. ENVIRONMENTAL SETTING

A. Existing Conditions

The City of Sierra Madre is in the Rio Hondo sub-watershed of the main Los Angeles River Watershed, which is approximately 834 square-miles in area. The city discharges all stormwater and other discharges via three outlets at the city's southern border. The only above-ground (visible) outlet is the Santa Anita Wash, which meanders through the lower canyon and is also seen at Sierra Madre Boulevard, near the Community Nursery School. The two underground outlets are located at Orange Grove Boulevard at Lima Street and Orange Grove Boulevard at the city boundary. They are part of the Arcadia Wash and join together near the Santa Anita Race Track. The Santa Anita Wash discharges enter Peck Road Park Lake and continue to the Rio Hondo sub-watershed. The Arcadia Wash discharges enter the Rio Hondo below the Peck Road Park Lake. The Rio Hondo sub-watershed joins the Los Angeles River in the City of Lynwood (right where Interstate 710 crosses Imperial Highway), and the finally discharges into the Long Beach Harbor.

The City of Sierra Madre owns and maintains approximately 9.62 miles of storm drains. The city's drainage system is typical in design and function of those in other municipalities in southern California. While the system is thoroughly regulated for pollutants, it was created for flood control purposes.

1) *Housing Element Project Sites*

Site 1

Site 1 includes nine parcels along Mariposa Avenue and Lima Street that are currently developed with single- and multi-family residential uses. Stormwater on Site 1 appears to permeate into landscaped areas or sheetflow towards the adjacent streets of W. Mariposa Avenue and S. Lima Street.

Site 2

Site 2 includes ten parcels along Suffolk Avenue and Baldwin Avenue developed with older multi-family development. Stormwater on Site 2 appears to permeate into landscaped areas or sheetflow towards the adjacent streets of S. Baldwin Avenue and Suffolk Avenue.

Site 3

Site 3 includes one parcel along Sierra Madre Boulevard that is currently developed with four older multi-family residential buildings, open space, and parking areas. Stormwater on Site 3 appears to permeate into landscaped areas or sheetflow towards the adjacent street of W. Sierra Madre Boulevard.

Site 4

Site 4 includes one parcel along N. Baldwin Avenue that is currently developed with a single-family residence. Stormwater on Site 4 appears to permeate into landscaped areas or sheetflow towards the adjacent streets of N. Baldwin Avenue and W. Laurel Avenue.

Site A

Site A is located on the parking area of St. Rita Catholic Church. Stormwater on Site A appears to sheetflow towards the adjacent street of E. Grand View Avenue.

Site B

Site B is located in the parking area of the United Methodist Church. Stormwater on Site B appears to sheetflow towards the adjacent streets of N. Michillinda Avenue and W. Montecito Avenue.

Site C

Site C is located on the parking area of the Old North Church. Stormwater on Site C appears to permeate into landscaped areas or sheetflow towards the adjacent street of N. Hermosa Avenue.

Site D

Site D is located on asphalt play areas and the parking area of the Bethany Church and School. Stormwater on Site D appears to sheetflow towards the adjacent streets of W. Highland Avenue and W. Montecito Avenue.

B. Regulatory Setting

1) *Local*

City of Sierra Madre Municipal Code

The city's Municipal Code contains existing standards and regulations that focus on storm drainage facility impacts. The following provisions from the City of Sierra Madre's Municipal Code are applicable to the General Plan Update:

- **Title 15 (Buildings and Construction), Chapter 15.04 (Building Code and Permits), Section 15.04.070 (Stormwater Retention).** Requires new developments to incorporate design elements for prevention of stormwater runoff onto non-permeable areas, stormwater retention and reuse for irrigation of landscaping, and rooftop designs, rain gutters, and other designs that can reuse stormwater.

- **Title 15 (Buildings and Construction), Chapter 15.58 (Low Impact Development Plan).** Contains requirements for construction activities and facility operations of development and redevelopment projects to comply with the current "municipal NPDES permit," lessen the water quality impacts of development, and integrate LID design principals to mimic predevelopment hydrology through infiltration, evapotranspiration, and rainfall harvest use.

- **Title 15 (Buildings and Construction), Chapter 15.60 (Water Efficient Landscape Ordinance), Section 15.60.100 (Stormwater Management).** Under the Water-Efficient Landscaping Ordinance, this section encourages stormwater management to minimize runoff and water waste to recharge groundwater, and to improve water quality. Best management practices involving landscape, irrigations, and grading design plans can help effectively retain and reuse stormwater.

City of Sierra Madre 2015 General Plan

The following are relevant policies and implementation measures of the Sierra Madre General Plan and Implementation Program.

General Plan Policies

Community Services Element

- Policy C31.1: Provide for storm drainage improvement where existing systems are deficient.

- Policy C31.2: Provide for the maintenance of existing water, sewer, and storm drainage systems.

- Policy C31.3: Require that new development be contingent upon the ability to be served by adequate sanitation collection and treatment, water, electrical and natural gas energy, telecommunication, storm drainage, and other supporting infrastructure.

- Policy C31.5: Require that new development capture for percolation on site the maximum practical amount of storm water.

- Policy C31.6: Provide for the modification of existing drainage systems to capture for percolation the maximum practical amount of storm water.

Resources Management Element

- Policy R3.4: Ensure the protection of natural open space so as to maintain it as a preventative measure against flooding, and as a means of capturing stormwater runoff for groundwater recharge.

- Policy R12.2: Actively follow state legislative and policy actions to ensure that Sierra Madre is able to use all of its water through the conservation of lands for groundwater recharge and storm water management.

- Policy R12.3: Develop new ways to capture and percolate storm water.

Hazard Prevention Element

- Policy Hz8.1: Require that residential tract developers be responsible for construction of drainage/storm drain systems improvements that are compatible with City and County systems within or adjacent to their project site.

- Policy Hz8.2: Install required public storm drainage improvements.

Implementation Program Measures

Flood/Landslide Implementation Program

- Measure IM-1: The City shall require that all new tract developments provide storm drainage infrastructure designed and built according to Los Angeles County Public Works/Flood Control District standards to allow for inclusion of those systems into the County Transfer Drain program.

Public Services Implementation Program

- Measure IM-1: The City shall review and amend as necessary Titles 15 (Buildings and Construction), 16 (Subdivisions), and 17 (Zoning) of the Municipal Code to require that all proposed developments be provided with adequate water, sewer, drainage, electrical, and telecommunications systems to meet the demands of the project.

3. ENVIRONMENTAL IMPACTS AND MITIGATIONS

A. Threshold of Significance

Appendix G of the CEQA Guidelines provides thresholds address impacts related to stormwater infrastructure. Specifically, the Guidelines state that the proposed project may have an adverse significant stormwater infrastructure impact if it would:

a) Require or result in the relocation of construction of new or expanded stormwater drainage facilities, the construction or relocation of which could cause significant environmental effects.

B. Project Impacts and Mitigation Measures

Impact L-4: Would the project require or result in the relocation of construction of new or expanded stormwater drainage facilities, the construction or relocation of which could cause significant environmental effects?

Impact Analysis:

The 2015 General Plan EIR determined that future development in accordance with the 2015 General Plan Update would not allow for a substantial increase in impervious surface areas and associated runoff given the built-out nature of the city. No sites identified for future growth under the 2015 General Plan are located in areas that are not already served by storm drainage collection systems. Minor stormwater infrastructure upgrades that would be required by individual development projects would be evaluated on a case-by-case basis. In addition, pursuant to NPDES and Chapter 15.58 (Low Impact Development Plan) of the city's Municipal Code, new development is required to adhere to the structural and non-structural best management practices (BMPs) to control stormwater runoff. Sections 15.04.070 and 15.60.100 further require new developments to incorporate design elements to prevent stormwater runoff and allow for stormwater retention and reuse. Furthermore, the 2015 General Plan Update and Implementation Program contains policies and implementation measures to reduce impacts of potential development on the city's storm drain system. As such, the 2015 General Plan EIR found that impacts to storm drain infrastructure would not be significant.

The project proposes land use designation changes, rezoning, and updates to the General Plan Land Use, Safety, and Circulation Elements. The update to the Land Use Element includes establishing two new multi-family residential land use categories (R-3-20 and R-3-30), creating an Affordable Housing Overlay on select congregational sites, along with minor changes to the Land Use table and map to accommodate residential land uses on the sites identified to meet the RHNA allocation. The update to the Safety Element includes policies related to limiting risk from wildfire, including avoiding development in Very High Fire Hazard Severity Zones (VHFHSZ), updating maps related to fire hazards, and developing a Vegetation Management Program. T The update to the Circulation Element includes minor updates to the existing setting and a policy update related to the City's adoption of VMT thresholds.

Changes in land use designations, rezoning, and updates to the Land Use Element would result in an increase in development within the city. Such increases would have the potential to increase stormwater runoff into the City's stormwater collection facilities. Specifically, although Sites A, B, and D are already entirely impervious, Sites 1-4 and Site C contain landscaped areas where stormwater is allowed to percolate into the subsurface and avoid runoff. Development on these sites would increase the amount of impervious surfaces and could result in localized increases in stormwater runoff. However, as with the potential development sites identified in the 2015 General Plan Update, potential development sites identified by the project are also located in areas already served by existing stormwater collection infrastructure. In addition, future development that would be supported by the project would be subject to the NPDES and Municipal Code requirements to incorporate site- and project-specific structural and non-structural BMPs to prevent stormwater runoff and promote onsite retention and reuse of stormwater. Furthermore, the policies and implementation measures to reduce impacts of potential development on the city's storm drain system contained in the 2015 General Plan Update and Implementation Program would continue to apply to new development within the City, including development that would be supported by the project.

Updates to the Safety Element would serve to reduce the city's risks from wildfire and primarily involves limitations on the types of developments within areas of increased fire hazards and vegetation maintenance and would not have the potential to impact stormwater infrastructure.

Updates to the Circulation Element are primarily ministerial and pertain to the city's approach for analyzing transportation-related environmental impacts and would not have the potential to impact stormwater infrastructure.

Based on the above, no new significant impacts related to stormwater infrastructure would occur as a result of the project and, as with the 2015 General Plan EIR, impacts would be less than significant.

Mitigation Measures:

None required.

4. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Similar to the findings of the 2015 General Plan EIR, all impacts would be less-than significant. No mitigation measures are necessary.

IV. ENVIRONMENTAL IMPACT ANALYSIS
L.4 UTILITIES – SOLID WASTE

1. INTRODUCTION

This section of the SEIR analyzes the potential environmental effects related to solid waste from implementation of the proposed project. Information in this section is based in part on the Los Angeles County Department of Public Work's Countywide Integrated Waste Management Plan (CIWMP).[24]

A. 2015 General Plan EIR Analysis and Conclusions

The 2015 General Plan EIR determined that future development in accordance with the 2015 General Plan Update would not require new or expanded solid waste disposal facilities. Future development would generate additional solid waste within the City, however, the capacity of the Scholl Canyon Landfill would not be adversely affected by the additional solid waste generation. In addition, once the waste-by-rail system currently under construction is up and running, an additional 100 years of disposal capacity will be available. Furthermore, the 2015 General Plan Update and Implementation Program contains policies and measures to prevent impacts to solid waste facilities. As such, the 2015 General Plan EIR found that impacts to solid waste infrastructure would not be significant.

The 2015 General Plan EIR determined that implementation of the 2015 General Plan Update would not impede the City's ability to continue to meet the required waste diversion requirements of AB 939 and AB 341. The City is a member of the Los Angeles Regional Agency (LARA), which promotes environmental responsibility and whose members have a combined solid waste diversion rate that exceeds the statewide mandates of AB 939 and AB 341. Future development that would be accommodated by the 2015 General Plan Update would also be required to comply with all laws and regulations governing solid waste and recycling, including AB 939 and AB 341, as well as the California Green Building Code, known as CALGreen, and Chapter 15.30 (Green Building Standards Code) of the City's Municipal Code, which outline requirements for construction waste reduction, material selection, and natural resource conservation and, as a result, would not affect the City's ability to meet diversion requirements. Furthermore, the 2015 General Plan Update and Implementation Program contains policies and measures to prevent conflicts with solid waste regulations. As such, the 2015 General Plan EIR found that the 2015 General Plan Update would not conflict with solid waste regulations and impacts would not be significant.

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[24] *Los Angeles County, Department of Public Works, Countywide Integrated Waste Management Plan, 2019 Annual Report, September 2020, available at: https://dpw.lacounty.gov/epd/swims/ShowDoc.aspx?id=14372&hp=yes&type=PDF, accessed July 8, 2021.*

2. ENVIRONMENTAL SETTING

A. Existing Conditions

1) *Solid Waste Collection and Disposal*

The Los Angeles County Sanitation Districts (Sanitation Districts) are responsible for implementation of the Countywide Integrated Waste Management Plan (CIWMP) and managing solid waste on a regional basis. The City of Sierra Madre is within the service boundary of District 15. The Sanitation Districts operate three sanitary landfills, four landfill energy recovery facilities, two recycle centers, three materials recovery/transfer facilities, and participate in the operation of two refuse-to-energy facilities. Since the primary landfill for the Los Angeles County (Puente Hills Landfill) has closed and alternative sites are being identified.

Specifically, the Puente Hills Intermodal Facility (PHIMF) for the waste-by-rail operations will be located next to the Puente Hills Materials Recovery Facility (MRF) in the City of Industry, which is owned and operated by the Sanitation Districts. The PHIMF will be a dedicated rail yard to serve the Sanitation Districts' waste-by-rail program. The PHIMF will expand the county's ability to dispose of solid waste by providing a facility that transfers containerized municipal solid waste and transports it by train to the Mesquite Regional Landfill in Imperial County. At the PHIMF, rail-ready shipping containers of municipal solid waste will be transferred from trucks to trains for transport to the Mesquite Regional Landfill. The PHIMF will have a design capacity of two trains per day, which equates to 8,000 tons per day of containerized municipal solid waste; the Mesquite Regional Landfill has capacity for 100 years disposal at that rate. The Sanitation Districts began construction of the PHIMF in the City of Industry in 2009 and have completed planning and development of all system components except for the local intermodal facility, which is currently under construction. Date of operation is not certain but is assumed to begin in 2024.[25]

Sierra Madre is also one of only a few jurisdictions that are allowed to use Scholl Canyon Landfill due to a City of Glendale ordinance. School Canyon Landfill has a permitted throughput of 3,400 tons per day and a maximum capacity of 58.9 cubic yards. As of December 31, 2019, Scholl Canyon Landfill had a remaining capacity of 6.45 million cubic yards and an anticipated remaining life of 11 years.[26]

The city uses Athens Services as its exclusive franchise residential and commercial waste and recycling hauler. Athens Services' MRF is located at 14048 Valley Boulevard in unincorporated Basset near the City of Industry. The facility is a computer-controlled, state-of-the-art plant designed specifically for the processing of municipal solid waste. The maximum permitted throughput is 5,000 tons of waste per day. Construction and demolition debris is also processed at this facility, although in a separate building. At the facility, waste is sorted and recyclable materials are removed. Many materials are baled and shipped to both foreign and domestic markets. For household hazardous waste collection, the city uses programs provided by Los Angeles County. Residents of Sierra Madre are provided automated containers from

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[25] *Los Angeles County, Department of Public Works, Countywide Integrated Waste Management Plan, 2019 Annual Report, September 2020, page 7.*

[26] *Los Angeles County, Department of Public Works, Countywide Integrated Waste Management Plan, 2019 Annual Report, September 2020, Appendix E-2, Table 4, Remaining Disposal Capacity of Existing Solid Waste Disposal Facilities in Los Angeles County.*

Athens Services for dispensing organic waste, green waste, and recyclables. Athens Services also offers other services, including the pick-up of bulky and hard-to-bundle items (e.g. water heaters, furnaces, and dryers), bear-resistant trash containers, and the provision of large containers that can handle large volumes of material.

The city is involved in curbside recycling with the assistance of Athens Services. Since July 1, 2012, the city has also been implementing commercial recycling. A drop-off community recycling bin is located in Sierra Vista Park and the city financially incentivizes using the recycling and yard waste bins through charging for trash service based on the size and quantity of trash bins. Through its membership in the Los Angeles Regional Agency (LARA [discussed in detail below]) and mandatory recycling program, the city has consistently requirements to divert 50 percent of solid waste from landfills.[27] Additionally, through its use of Athens Services, the city has been able to maintain compliance with the statewide requirement that 75 percent of solid waste generated in California be source reduced,[28] recycled, or composted.

The city is currently in discussions with Athens Services to adjust the program in order to comply with organics recycling mandates from the state before January 1, 2022.

2) *Los Angeles Regional Agency*

LARA, recognized and formed in 2004 by CalRecycle, started with 14 charter cities and now includes 18 cities (including Sierra Madre) located throughout Los Angeles County. LARA promotes environmental responsibility and all members of LARA work together to ensure their cities meet and exceed solid waste diversion mandates. LARA allows cities to share costs and conduct new "regional level" base year studies and is allowed to average waste diversion and disposal over all cities in the agency.

3) *Housing Element Project Sites*

Site 1

Site 1 includes nine parcels along Mariposa Avenue and Lima Street that are currently developed with single- and multi-family residential uses. Residential and commercial waste and recycling hauling is provided by Athens Services.

Site 2

Site 2 includes ten parcels along Suffolk Avenue and Baldwin Avenue developed with older multi-family development. Residential and commercial waste and recycling hauling is provided by Athens Services.

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[27] *City of Sierra Madre, Environmental Services, Recycling website, available at: https://www.cityofsierramadre.com/services/environmental_services/recycling, accessed July 8, 2021.*

[28] *Source reduction refers to activities designed to reduce the volume, mass, or toxicity of products throughout their life cycle. It includes the design and manufacture, use, and disposal of products with minimum toxic content, minimum volume of material, and/or a longer useful life.*

Site 3

Site 3 includes one parcel along Sierra Madre Boulevard that is currently developed with four older multi-family residential buildings, open space, and parking areas. Residential and commercial waste and recycling hauling is provided by Athens Services.

Site 4

Site 4 includes one parcel along N. Baldwin Avenue that is currently developed with a single-family residence. Residential and commercial waste and recycling hauling is provided by Athens Services.

Site A

Site A is located on the parking area of St. Rita Catholic Church. Because Site A is currently developed as a parking lot only, no residential and commercial waste and recycling hauling is currently provided to the site, however service would be provided by Athens Services.

Site B

Site B is located in the parking area of the United Methodist Church. Because Site B is currently developed as a parking lot only, no residential and commercial waste and recycling hauling is currently provided to the site, however service would be provided by Athens Services.

Site C

Site C is located on the parking area of the Old North Church. Because Site C is currently developed as a parking lot only, no residential and commercial waste and recycling hauling is currently provided to the site, however service would be provided by Athens Services.

Site D

Site D is located on asphalt play areas and the parking area of the Bethany Church and School. Because Site D is currently developed as a parking lot only, no residential and commercial waste and recycling hauling is currently provided to the site, however service would be provided by Athens Services.

B. Regulatory Setting

1) *Federal*

The Resource Conservation and Recovery Act of 1976 (RCRA – Title 40 of the Code of Federal Regulations), Part 258, contains regulations for municipal solid waste landfills and requires states to implement their own permitting programs incorporating the federal landfill criteria. The federal regulations address the location, operation, design (liners, leachate collection, run-off control, etc.), groundwater monitoring, and closure of landfills.

2) *State*

Assembly Bill 939: Integrated Waste Management Act of 1089

The California Integrated Waste Management Act of 1989 ("AB 939"), as amended, was enacted to reduce, recycle, and reuse solid waste generated in the state. AB 939 requires city and county jurisdictions to divert 50 percent of the total waste stream from landfill disposal. AB 939 also requires each city and county to promote source reduction, recycling, and safe disposal or transformation. AB 939 further requires each city and county to conduct a Solid Waste Generation Study and to prepare a Source Reduction and Recycling Element to describe how it would reach these goals. The Source Reduction and Recycling Element contains programs and policies for fulfillment of the goals of AB 939, including the above-noted diversion goals, and must be updated annually to account for changing market and infrastructure conditions. As projects and programs are implemented, the characteristics of the waste stream, the capacities of the current solid waste disposal facilities, and the operational status of those facilities are upgraded, as appropriate. California cities and counties are required to submit annual reports to CalRecycle to update their progress toward the AB 939 goals.[29,30]

Assembly Bill 1327

The California Solid Waste Reuse and Recycling Access Act of 1991 (AB 1327) is codified in Public Resources Code Sections 42900-42911. As amended, AB 1327 requires each local jurisdiction to adopt an ordinance requiring commercial, industrial, or institutional building, marina, or residential buildings having five or more living units to provide an adequate storage area for the collection and removal of recyclable materials. The size of these storage areas is to be determined by the appropriate jurisdiction's ordinance.

Senate Bill 1374

Signed in 2002, the Construction and Demolition Waste Materials Diversion Requirements (Senate Bill [SB] 1374) were codified in Public Resources Code Section 42919. SB 1374 requires that jurisdictions include in their annual AB 939 report a summary of the progress made in diverting construction and demolition waste. The legislation also required that CalRecycle adopt a model ordinance for diverting 50 to 75 percent of all construction and demolition waste from landfills. The model ordinance was adopted by CalRecycle on March 16, 2004.[31]

Assembly Bill 341

AB 341, signed on February 10, 2011, directed that no less than 75 percent of solid waste generated in California be source reduced,[32] recycled, or composted by 2020, and required CalRecycle to provide a report to the Legislature that recommends strategies to achieve the policy goal by January 1, 2014. AB 341 also mandated local jurisdictions to implement commercial recycling by July 1, 2012.

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[29] *CalRecycle is shorthand for the California Department of Resources Recycling and Recovery, a new department within the California Natural Resources Agency that administers programs formerly managed by the State's Integrated Waste Management Board and Division of Recycling.*

[30] *California Public Resources Code, Section 41821.*

[31] *CalRecycle, Senate Bill 1374 (2002), August 24, 2018, https://www2.calrecycle.ca.gov/Docs/CIWMBMeeting/Agenda/821, accessed July 8, 2021.*

[32] *Source reduction refers to activities designed to reduce the volume, mass, or toxicity of products throughout their life cycle. It includes the design and manufacture, use, and disposal of products with minimum toxic content, minimum volume of material, and/or a longer useful life.*

Assembly Bill 1826

AB 1826 requires jurisdictions to implement an organic waste recycling program for businesses, including outreach, education, and monitoring of affected businesses. Additionally, each jurisdiction is to identify a multitude of information, including barriers to siting organic waste recycling facilities, as well as closed or abandoned sites that might be available for new organic waste recycling facilities. AB 1826 defines "organic waste" as food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste. It also defines a "business" as a commercial or public entity, including, but not limited to, a firm, partnership, proprietorship, joint stock company, corporation, or association that is organized as a for-profit or nonprofit entity, or a multifamily residential dwelling consisting of five or more units. As of January 1, 2017, businesses that generate 4 cubic yards or more of organic waste per week are subject to this requirement. Commencing January 1, 2019, businesses that generate 4 cubic yards or more of commercial solid waste per week also are required to arrange for organic waste recycling services. CalRecycle may reduce this triggering threshold for organics recycling to 2 cubic yards or more of commercial solid waste per week as of January 1, 2020.[33]

Assembly Bill 1383

AB 1383, Short-Lived Climate Pollutant Reduction Strategy adds enforcement provisions to meet organic waste reduction and edible food recovery targets. It includes providing organic wast collection to all residents and businesses in the city as well as monitoring requirements and reporting requirements. These will take effect on January 1, 2022.

California Green Building Standards

The 2019 California Green Building Standards Code, referred to as the CALGreen Code,[34] sets standards for new structures to minimize the state's carbon output. California requires that new buildings reduce water consumption, increase building system efficiencies, divert construction waste from landfills, and install low pollutant-emitting finish materials. Each local jurisdiction retains the administrative authority to exceed the new CALGreen standards. The 2019 CALGreen Code went into effect January 1, 2020.

3) *Regional*

The Los Angeles County Integrated Waste Management Plan

Pursuant to AB 939, each County is required to prepare and administer a CIWMP, including preparation of an Annual Report. The CIWMP is to comprise of the various counties' and cities' solid waste reduction planning documents, plus an Integrated Waste Management Summary Plan (Summary Plan) and a Countywide Siting Element (CSE). The Summary Plan describes the steps to be taken by local agencies, acting independently and in concert, to achieve the mandated state diversion rate by integrating strategies aimed toward reducing, reusing, recycling, diverting, and marketing solid waste generated

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[33] *CalRecycle, Mandatory Commercial Organics Recycling (MORe), www.calrecycle.ca.gov/recycle/commercial/organics/, accessed July 8, 2021.*

[34] *Building Standards Commission, CALGreen, www.dgs.ca.gov/BSC/Codes, accessed July 8, 2021.*

within the County. The County's Department of Public Works is responsible for preparing and administering the Summary Plan and the CSE.

The County continually evaluates landfill disposal needs and capacity as part of the preparation of the CIWMP Annual Report. Within each annual report, future landfill disposal needs over the next 15-year planning horizon are addressed in part by determining the available landfill capacity. The most recent annual report, the CIWMP 2019 Annual Report, published in September 2020, provides disposal analysis and facility capacities for 2019, as well as projections to the CIWMP's horizon year of 2034.[35] As stated within the CIWMP 2019 Annual Report, the County is not anticipating a solid waste disposal capacity shortfall within the next 15 years under current conditions.[36] A variety of strategies, including maximizing waste reduction and recycling; studying, promoting, and developing alternative technologies; expanding transfer and processing infrastructure; and utilizing out-of-county disposal (including waste-by-rail) would be implemented to ensure that the County would be able to accommodate the solid waste generated through the horizon year of 2034.[37]

4) *Local*

City of Sierra Madre Municipal Code

The city's Municipal Code contains existing standards and regulations that focus on solid waste services impacts. The following provisions from the Municipal Code are applicable to the General Plan Update:

- **Title 3 (Revenue and Finance), Chapter 3.36 (Utility Users Tax), Section 3.36.095 (Solid Waste Disposal Users Tax).** Imposes a tax upon every person in the city using waste or refuse collection and disposal services. This solid waste disposal user's tax is part of the Utility Users Tax (UUT), which provides for a 10 percent rate.
- **Title 8 (Health and Safety), Chapter 8.12 (Garbage and Refuse Collection and Disposal).** Details the city's regulations related to garbage and refuse collection and disposal, including prohibited collection and placement of garbage, waste, or refuse; residential, commercial, and industrial use responsibilities, construction contractor and gardener exclusions; and receptacle placement and collection times.
- **Title 8 (Health and Safety), Chapter 8.13 (Construction and Demolition Waste Disposal).** Requires preparation of a waste management plan (WMP) for all projects within the city. Compliance with the WMP shall be a condition of approval on any building or demolition permit issued by the city.

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[35] *County of Los Angeles, Department of Public Works, Countywide Integrated Waste Management Plan, 2019 Annual Report, September 2020.*

[36] *County of Los Angeles Department of Public Works, Countywide Integrated Waste Management Plan 2018 Annual Report, page 50.*

[37] *County of Los Angeles Department of Public Works, Countywide Integrated Waste Management Plan 2018 Annual Report, page 50 through 51.*

City of Sierra Madre 2015 General Plan

The following are relevant policies and implementation measures of the Sierra Madre General Plan and Implementation Program.

General Plan Policies

Resource Management Element

- Policy R18.1: Maintain a contract with a waste hauler to provide service to residences, businesses, institutions, and city government facilities for trash collection.
- Policy R18.2: Maintain a contract with a single waste hauler to provide trash collection services to commercial businesses, thereby simplifying the commercial recycling program.
- Policy R18.3: Continue to provide opportunities for the disposal of large household items.
- Policy R19.1: Require the waste collection provider to provide recycling bins to all customers in the city, including in the business district. Cardboard should be collected at sites in the business district.
- Policy R19.2: Continue the collection of new types of plastic.
- Policy R19.3: Continue to enforce the Construction and Demolition Ordinance to require builders to separate and recycle discarded building materials, including lumber, metal, cement, etc.
- Policy R19.4: City offices shall purchase and use post-consumer and recycled products to the extent feasible.
- Policy R19.5: Promote green waste and recycling programs such as “green and clean” which increase the usage of green waste for compost and reduces the amount of green waste exported.
- Policy R20.1: Continue to work with Los Angeles County Department of Public Works to provide a free household hazardous waste pick-up at least once a year.
- Policy R20.2: Continue to provide information to community members regarding free household hazardous waste pick-up sponsored by Lo Angeles County Department of Public Works.
- Policy R21.1: Continue to provide for adequate trash removal, installation, and maintenance of trash receptacles on street and in parks, and regular street sweeping.

Community Services Element

- Policy C31.3: Require that new development be contingent upon the ability to be served by adequate sanitation collection and treatment, water, electrical and natural gas energy, telecommunication, storm drainage, and other supporting infrastructure.

Implementation Program Measures

Waste Management and Recycling Implementation Program

- Measure IM-1: The City shall continue to make adequate waste removal services available to existing and future residents.
- Measure IM-2: The City shall encourage recycling through the purchase of recycled products, enforcement of recycling of construction and demolition debris, and the promotion of composting and green waste programs.
- Measure IM-3: The City shall continue to provide residents with a proper means of disposal of hazardous waste through participation in the Household Hazardous Waste Roundup.

3. ENVIRONMENTAL IMPACTS AND MITIGATIONS

A. Threshold of Significance

Appendix G of the CEQA Guidelines provides thresholds address impacts related to solid waste. Specifically, the Guidelines state that the proposed project may have an adverse significant solid waste impact if it would:

a) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals; or
b) [Not] comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

B. Project Impacts and Mitigation Measures

Impact L-5: Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Impact Analysis:

The 2015 General Plan EIR determined that future development in accordance with the 2015 General Plan Update would not require new or expanded solid waste disposal facilities. Future development would generate additional solid waste within the City, however, the capacity of the Scholl Canyon Landfill would not be adversely affected by the additional solid waste generation. In addition, once the waste-by-rail system currently under construction is up and running, an additional 100 years of disposal capacity will be available. Furthermore, the 2015 General Plan Update and Implementation Program contains policies and measures to prevent impacts to solid waste facilities. As such, the 2015 General Plan EIR found that impacts to solid waste infrastructure would not be significant.

The project proposes land use designation changes, rezoning, and updates to the General Plan Land Use, Safety, and Circulation Elements. The update to the Land Use Element includes establishing two new multi-family residential land use categories (R-3-20 and R-3-30), creating an Affordable Housing Overlay on select congregational sites, along with minor changes to the Land Use table and map to accommodate residential land uses on the sites identified to meet the RHNA allocation. The update to the Safety Element includes policies related to limiting risk from wildfire, including avoiding development in Very High Fire Hazard Severity Zones (VHFHSZ) updating maps related to fire hazards, and developing a Vegetation

Management Program. The update to the Circulation Element includes minor updates to the existing setting and a policy update related to the City's adoption of VMT thresholds.

Changes in land use designations, rezoning, and updates to the Land Use Element would result in an increase in development and an associated increase in solid waste generation within the City. Specifically, an additional 211 residential units could be developed under the project. **Table IV.L.5-1, Estimated Solid Waste Generation Under the Project**, presents the estimated additional solid waste that would be generated by an additional 211 residential units in the City.

Table IV.L.5-1
Estimated Daily Solid Waste Generation Under the Project

Land Use	Buildout Under the Project (dwelling units)	Generation Rate (lbs/day) [1]	Total (lbs/day)
Residential	211	12.23	2,581

Notes:
lbs/day = pounds per day
1 Generation rate source: CalRecycle, Residential Sector Generation Rates, https://www2.calrecycle.ca.gov/wastecharacterization/general/rates, accessed July 9, 2021.

As shown in **Table IV.L.1**, buildout under the project would generate an increase of approximately 2,581 pounds of solid waste per day in the City. Under a contract with the City, Athens Services would continue to provide services to future development in Sierra Madre. As previously discussed, Scholl Canyon Landfill has a maximum throughput of 3,400 tons per day (or 6,800,000 pounds per day). The additional solid waste that would be generated from future development under the project would represent approximately 0.4 percent of the landfill's daily throughput. In addition, Athens Services would first take all solid waste collected in the City, including that which would be produced by futured development under the project, to its MRF to sort and remove recyclable materials, which would reduce the amount of solid waste that would be disposed of at the landfill. Furthermore, as previously discussed, the PHIMF is expected to be operational by 2024 and would expand the county's disposal capacity. As such, both existing and future landfills would have adequate capacity to accommodate additional solid waste that would be generated by future development under the project.

Updates to the Safety Element would serve to reduce the City's risks from wildfire. Solid waste would be produced from vegetation removal activities associated with Vegetation Management Program activities, however, such solid waste would be considered green waste and would be disposed of in accordance with applicable green waste and composting regulations and policies. The minor amount of green waste that would be generated from vegetation removal would not have the potential to exceed disposal capacity.

Updates to the Circulation Element are primarily ministerial and pertain to the City's approach for analyzing transportation-related environmental impacts and would not have the potential to exceed disposal capacity.

Based on the above, no new significant impacts related to solid waste disposal capacity would occur as a result of the project and, as with the 2015 General Plan EIR, impacts would be less than significant.

Mitigation Measures:

None required.

Impact L-6: Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Impact Analysis:

The 2015 General Plan EIR determined that implementation of the 2015 General Plan Update would not impede the City's ability to continue to meet the required waste diversion requirements of AB 939 and AB 341 and organics recycling requirements of AB 1826 and SB 1383. The City is a member of the Los Angeles Regional Agency (LARA), which promotes environmental responsibility and whose members have a combined solid waste diversion rate that exceeds the statewide mandates of AB 939 and AB 341. Future development that would be accommodated by the 2015 General Plan Update would also be required to comply with all laws and regulations governing solid waste and recycling, including AB 939 and AB 341, as well as the California Green Building Code, known as CALGreen, and Chapter 15.30 (Green Building Standards Code) of the City's Municipal Code, which outline requirements for construction waste reduction, material selection, and natural resource conservation and, as a result, would not affect the City's ability to meet diversion requirements. Furthermore, the 2015 General Plan Update and Implementation Program contains policies and measures to prevent conflicts with solid waste regulations. As such, the 2015 General Plan EIR found that the 2015 General Plan Update would not conflict with solid waste regulations and impacts would not be significant.

The project proposes land use designation changes, rezoning, and updates to the General Plan Land Use, Safety, and Circulation Elements. The update to the Land Use Element includes establishing two new multi-family residential land use categories (R-3-20 and R-3-30), creating an Affordable Housing Overlay on select congregational sites, along with minor changes to the Land Use table and map to accommodate residential land uses on the sites identified to meet the RHNA allocation. The update to the Safety Element includes policies related to limiting risk from wildfire, including avoiding development in Very High Fire Hazard Severity Zones (VHFHSZ) updating maps related to fire hazards, and developing a Vegetation Management Program. The update to the Circulation Element includes minor updates to the existing setting and a policy update related to the City's adoption of VMT thresholds.

Changes in land use designations, rezoning, and updates to the Land Use Element would result in an increase in development and an associated increase in solid waste generation within the City. However, solid waste generated by all future development within the City, including development that would be supported by the project, would continue to be serviced by Athens Services, which provides curbside green waste and recycling pick-up, as well as a community-use recycling center in Sierra Vista Park. In addition, the City would continue its membership in LARA, which promotes the attainment and exceedance of statewide solid waste diversion goals. As with development that would be accommodated by the 2015 General Plan Update, development that would be supported by the project would also be required to comply with all applicable laws and regulations governing solid waste and recycling. In addition to the diversion requirements of AB 939 and AB 341, CALGreen and Chapter 15.30 (Green Building Standards Code) of the City's Municipal Code outline requirements for construction waste reduction, material selection, and natural resource conservation. Furthermore, the General Plan and Implementation Program contain polices and measures to ensure that development within the City does not conflict with solid waste regulations.

Updates to the Safety Element would serve to reduce the City's risks from wildfire and would not have the potential to affect the City's ability to meet solid waste reduction statues and goals.

Updates to the Circulation Element are primarily ministerial and pertain to the City's approach for analyzing transportation-related environmental impacts and would not have the potential to affect the City's ability to meet solid waste reduction statues and goals.

Based on the above, no new significant conflicts with solid waste reduction statues and goals would occur as a result of the project and, as with the 2015 General Plan EIR, impacts would be less than significant.

Mitigation Measures:

None required.

4. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Similar to the findings of the 2015 General Plan EIR, all impacts would be less-than significant. No mitigation measures are necessary.

IV. ENVIRONMENTAL IMPACT ANALYSIS
L.5 UTILITIES – ENERGY

5. INTRODUCTION

This section of the SEIR analyzes the potential environmental effects related to relocation, reconstruction, or expansion of energy (electricity and natural gas) infrastructure from implementation of the proposed project.

A. 2015 General Plan EIR Analysis and Conclusions

The 2015 General Plan EIR addressed an increase in energy demand that would require new or expanded facilities. Energy demand analysis is included in Section IV.B, Greenhouse Gas. The 2015 General Plan EIR did not address relocation or construction of new or expanded electricity or natural gas facilities, which is included here.

6. ENVIRONMENTAL SETTING

A. Existing Conditions

1) *Electricity*

The City of Sierra Madre's electrical needs are delivered and administered by Southern California Edison (SCE). In 2017, the city adopted Ordinance No. 1393 joining the Los Angeles Community Choice Energy Program (renamed to Clean Power Alliance) to purchase clean energy commodities on the market The Clean Power Alliance (CPA) is a joint powers authority that now includes 32 communities in Los Angeles and Ventura Counties. Upon joining the Alliance, the City selected a default tier of 50% renewable energy content for the city's residential and commercial accounts. Customers have the option to select the 36% tier or the 100% tier, or go back to SCE for the energy commodity. In 2020, the City Council adjusted the default tier to 100% clean energy for Sierra Madre.

SCE continues to deliver the energy through their infrastructure and also administers and provides customer service for the utility. The majority of SCE facilities in the city are overhead, consisting of wood power poles, overhead conductors, transformers, and various other types of pole-mounted equipment. Some customers have individual underground-fed services, such as a pad-mounted transformer, or a residential customer who has opted to have their service installed underground. SCE has engaged in aggressive infrastructure improvements in Sierra Madre since 2018, replacing a considerable amount of poles and lines, concentrating on the high fire areas.

SCE regularly reviews its grid system and infrastructure for reliability of service to its customers. In addition, capital improvements by SCE are funded from SCE's General Rate Case (GRC) approved by the California Public Utilities Commission (CPUC) for expansion and improvement projects within SCE's power grid. The GRC is SCE's proposal to CPUC for what it needs to continue to provide high level service to its customers. It is a mandated regulatory proceeding that SCE goes through every three years, in which SCE requests funds for its infrastructure, maintenance, and upgrade investments. The funding that is allocated to SCE is used to inspect, repair, and when appropriate, upgrade its electrical infrastructure within its 50,000 square-mile service territory, which includes Sierra Madre.

2) *Natural Gas*

The City of Sierra Madre's natural gas needs are provided by Southern California Gas Company (SoCalGas). SoCalGas does not have any natural gas building facilities within the city's boundaries and no deficiencies or inefficiencies currently exist. Additionally, there are no plans by SoCalGas to expand natural gas facilities at this time. Capital improvement projects for SoCalGas are generally underwritten by SoCalGas ratepayers.

3) *Housing Element Project Sites*

Site 1

Site 1 includes nine parcels along Mariposa Avenue and Lima Street that are currently developed with single- and multi-family residential uses. Electrical and natural gas services are provided by CPA/SCE and SoCalGas, respectively.

Site 2

Site 2 includes ten parcels along Suffolk Avenue and Baldwin Avenue developed with older multi-family development. Electrical and natural gas services are provided by CPA/SCE and SoCalGas, respectively.

Site 3

Site 3 includes one parcel along Sierra Madre Boulevard that is currently developed with four older multi-family residential buildings, open space, and parking areas. Electrical and natural gas services are provided by CPA/SCE and SoCalGas, respectively.

Site 4

Site 4 includes one parcel along N. Baldwin Avenue that is currently developed with a single-family residence. Electrical and natural gas services are provided by CPA/SCE and SoCalGas, respectively.

Site A

Site A is located on the parking area of St. Rita Catholic Church. Because Site A is currently developed as a parking lot only, no electrical or natural gas services are currently provided to the site, however service would be provided by CPA/SCE and SoCalGas, respectively.

Site B

Site B is located in the parking area of the United Methodist Church. Because Site B is currently developed as a parking lot only, no electrical or natural gas services are currently provided to the site, however service would be provided by CPA/SCE and SoCalGas, respectively.

Site C

Site C is located on the parking area of the Old North Church. Because Site C is currently developed as a parking lot only, no electrical or natural gas services are currently provided to the site, however service would be provided by CPA/SCE and SoCalGas, respectively.

Site D

Site D is located on asphalt play areas and the parking area of the Bethany Church and School. Because Site D is currently developed as a parking lot only, no electrical or natural gas services are currently provided to the site, however service would be provided by CPA/SCE and SoCalGas, respectively.

B. Regulatory Setting

1) *Federal*

The United States Department of Energy (DOE) is the federal agency responsible for establishing policies regarding energy conservation, domestic energy production and infrastructure. The Federal Energy Regulatory Commission (FERC) is an independent federal agency, officially organized as part of the DOE which is responsible for regulating interstate transmission of natural gas, oil and electricity, reliability of the electric grid and approving of construction of interstate natural gas pipelines and storage facilities. The Energy Policy Act of 2005 has also granted FERC with additional responsibilities of overseeing the reliability of the nation's electricity transmission grid and supplementing state transmission siting efforts in national interest electric transmission corridors.

FERC has authority to oversee mandatory reliability standards governing the nation's electricity grid. FERC has established rules on certification of an Electric Reliability Organization (ERO) which establishes, approves, and enforces mandatory electricity reliability standards. The North American Electric Reliability Corporation (NERC) has been certified as the nation's ERO by FERC to enforce reliability standards in all interconnected jurisdictions in North America. Although FERC regulates the bulk energy transmission and reliability throughout the United States, the areas outside of FERC's jurisdictional responsibility include state level regulations and retail electricity and natural gas sales to consumers which falls under the jurisdiction of state regulatory agencies.

2) *State*

California energy infrastructure policy is governed by three institutions: the California Independent System Operator (California ISO), the California Public Utilities Commission (CPUC), and the California Energy Commission (CEC). These three agencies share similar goals, but have different roles and responsibilities in managing the state's energy needs. The majority of state regulations with respect to electricity and natural gas pertain to energy conservation. There are, however, regulations pertaining to infrastructure. These are discussed further below.

California Independent System Operator

The California ISO is an independent public benefit corporation responsible for operating California's long-distance electric transmission lines. The California ISO is led by a five-member board appointment by the Governor and is also regulated by FERC. While transmission owners and private electric utilities own their lines, the California ISO operates the transmission system independently to ensure that electricity flows comply with federal operational standards. The California ISO analyzes current and future electrical demand and plans for any needed expansion or upgrade of the electric transmission system.

California Public Utilities Commission

The CPUC establishes policies and rules for electricity and natural gas rates provided by private utilities in California such as Southern California Edison (SCE) and Southern California Gas Company (SoCalGas). Public owned utilities such as the Los Angeles Department of Water and Power (LADWP) do not fall under the CPUCs jurisdiction. The Digital Infrastructure and Video Competition Act of 2006 (DIVCA) established the CPUC as the sole cable/video TV franchising authority in the State of California. DIVCA took effect January 1, 2007.

The CPUC is overseen by five commissioners appointed by the Governor and confirmed by the state Senate. The CPUC's responsibilities include regulating electric power procurement and generation, infrastructure oversight for electric transmission lines and natural gas pipelines and permitting of electrical transmission and substation facilities.

California Energy Commission

The CEC is a planning agency which provides guidance on setting the state's energy policy. Responsibilities include forecasting electricity and natural gas demand, promoting and setting energy efficiency standards throughout the state, developing renewable energy resources, and permitting thermal power plants 50 megawatts and larger. The CEC also has regulatory specific regulatory authority over publicly owned utilities to certify, monitor and verify eligible renewable energy resources procured.

Senate Bill 1389

Senate Bill (SB) 1389 (Public Resources Code Sections 25300–25323), adopted in 2002, requires the development of an integrated plan for electricity, natural gas, and transportation fuels. Under the bill, the CEC must adopt and transmit to the Governor and Legislature an Integrated Energy Policy Report every two years. In 2018, the CEC decided to write the Integrated Energy Policy Report in two volumes. The Volume I, which was published on August 1, 2018, highlights the implementation of California's innovative policies and the role they have played in moving toward a clean energy economy. Volume II, which was adopted in February 2019, identifies several key energy issues and actions to address these issues and ensure the reliability of energy resources.[38]

Senate Bill 649

Senate Bill 649 (SB 649) requires small cellular installations be on vertical infrastructure and on property outside of public rights-of-way. The installation is required to comply with all applicable federal, state, and local health and safety regulations. Additionally, cellular equipment that is no longer in use is required to be removed at no cost to the City.

3) *Local*

City of Sierra Madre Municipal Code

The city's Municipal Code contains existing standards and regulations that focus on electricity and gas services impacts. The following provisions from the Municipal Code are applicable to the General Plan Update:

[38] *2018 Integrated Energy Policy Report Updated, Volume II, February 2019.*

- **Title 3 (Revenue and Finance), Chapter 3.36 (Utility Users Tax), Section 3.36.050 (Electricity Users Tax).** Imposes a tax upon every person in the city using electricity or electrical energy. This electricity user's tax is part of the Utility Users Tax (UUT), which provides for a 6 percent rate.
- **Title 3 (Revenue and Finance), Chapter 3.36 (Utility Users Tax), Section 3.36.070 (Gas Users Tax).** Imposes a tax upon every person in the city using gas which is transported through a pipeline distribution system or by mobile transport. This electricity user's tax is part of the Utility Users Tax (UUT), which provides for a 6 percent rate.

City of Sierra Madre 2015 General Plan

The following are relevant policies and implementation measures of the Sierra Madre General Plan and Implementation Program.

General Plan Policies

Resource Management Element

- Policy R6.2: Discourage continuous all-night exterior lighting and encourage motion-sensored lighting.
- Policy R7.1: The city shall use the lowest wattage of lamp that is feasible and encourage the public to do the same.
- Policy R7.2: The city shall, whenever possible, turn off the lights or use motion sensor controlled lighting and encourage the public to do the same.
- Policy R7.3: Investigate the possibility of having businesses turn off lights when they are closed.

Community Services Element

- Policy C31.3: Require that new development be contingent upon the ability to be served by adequate sanitation collection and treatment, water, electrical and natural gas energy, telecommunication, storm drainage, and other supporting infrastructure.

Implementation Program Measures

Public Services Implementation Program

- Measure IM-1: The City shall review and amend as necessary Titles 15 (Building and Construction), 16 (Subdivisions), and 17 (Zoning) of the Municipal Code to require that all proposed development be provided with adequate water, sewer, drainage, electrical, and telecommunications systems to meet the demands of the project.

7. ENVIRONMENTAL IMPACTS AND MITIGATIONS

A. Threshold of Significance

Appendix G of the CEQA Guidelines provides thresholds address impacts related to electricity and natural gas infrastructure. Specifically, the Guidelines state that the proposed project may have an adverse significant electricity and natural gas infrastructure impact if it would:

a) Require or result in the relocation or construction of new or expanded electricity or natural gas facilities, the construction or relocation of which could cause significant environmental effects.

B. Project Impacts and Mitigation Measures

Impact L-6: Would the project require or result in the relocation or construction of new or expanded electricity or natural gas facilities, the construction or relocation of which could cause significant environmental effects?

Impact Analysis:

Sites 1-4 and A-D are located in areas of Sierra Madre served by existing electricity and natural gas infrastructure. Construction of any development on Sites 1-4 and A-D would require the installation of new electrical and natural gas infrastructure that would connect to the existing system. With regard to existing electrical distribution lines, any project applicant would be required to coordinate electrical infrastructure removals or relocations with SCE and comply with site-specific requirements set forth by SCE, which would ensure that service disruptions and potential impacts associated with grading, construction, and development within SCE easements are minimized. As such, construction of the project is not anticipated to adversely affect the electrical infrastructure serving the surrounding uses or utility system capacity.

Similarly, construction that connects to any existing gas distribution lines would be required to coordinate infrastructure removals or relocations with SoCalGas and comply with site-specific requirements set forth by SoCalGas, which would ensure that service disruptions and potential impacts associated with grading, construction, and development within SoCalGas easements are minimized. As such, construction of the project is not anticipated to adversely affect the gas infrastructure serving the surrounding uses or utility system capacity.

Mitigation Measures:

None required.

8. LEVEL OF SIGNIFICANCE AFTER MITIGATION

All impacts would be less-than significant. No mitigation measures are necessary.

V. OTHER CEQA CONSIDERATIONS

1. INTRODUCTION

Section 15126 of the California Environmental Quality Act (CEQA) Guidelines requires that all aspects of a project must be considered when evaluating its impact on the environment, including planning, acquisition, development, and operation. As part of this analysis, the Draft SEIR must also identify (1) significant environmental effects that cannot be avoided if the proposed project is implemented; (2) significant irreversible environmental change that would result from implementation of the proposed project; and (3) growth-inducing impacts of the proposed project. As this is a Subsequent EIR, this analysis relies on the analysis in the 2015 General Plan EIR and discusses whether the project would result in impacts greater or different than described there.

2. SIGNIFICANT UNVAVOIDABLE ENVIRONMENTAL EFFECTS

Section 15126.2(c) of the CEQA Guidelines requires that an EIR describe any significant impacts that cannot be avoided. Specifically, Section 15126.2(c) states:

> *Describe any significant impacts, including those which can be mitigated but not reduced to a level of insignificance. Where there are impacts that cannot be alleviated without imposing an alternative design, their implications and the reasons why the project is being proposed, notwithstanding their effect, should be described.*

The 2015 General Plan EIR found that the project would result in significant unavoidable environmental impacts with respect to Air Quality, Greenhouse Gases, Noise, and Utilities and Service Systems.

Since the preparation of the 2015 General Plan EIR, the City has an updated 2020 Urban Water Management Plan. The 2020 UWMP determined that the City will have sufficient water supplies available to meet projected demands and a single dry year or a five consecutive year drought period will not compromise the City's ability to provide a reliable supply of water to its customer. Therefore, this impact is less than the findings of the 2015 General Plan EIR, which were significant and unavoidable.

Since the preparation of the 2015 General Plan EIR, the state has issued new regulatory guidance related to greenhouse gases. These regulatory updates are expected to reduce the emissions profile of the proposed uses as the regulatory initiatives identified by ARB in the First Update are implemented, and other technological innovations occur. Therefore, this impact is less than the findings of the 2015 General Plan EIR, which were significant and unavoidable.

Construction activities associated with the future development of the Housing Element would also generate short-term emissions in exceedance of SCAQMD's threshold criteria and cumulatively contribute to the nonattainment designations of the Basin. Despite the application of mitigation measures, similar to the findings of the 2015 General Plan EIR, impacts to air quality would be significant even with mitigation incorporated.

Due to the potential for proximity of construction activities to sensitive uses and potential longevity of construction activities, and despite the application of mitigation measures, similar to the findings of the 2015 General Plan EIR, impacts from construction noise and vibration would be significant even with mitigation incorporated.

3. SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

Section 15126.2(d) of the CEQA Guidelines states that significant irreversible environmental changes associated with a proposed project shall be discussed, including the following:

- *Uses of nonrenewable resources during the initial and continued phases of the project that may be irreversible because a large commitment of such resources makes removal or nonuse thereafter unlikely;*
- *Primary impacts and, particularly, secondary impacts (such as highway improvement that provides access to a previously inaccessible area), which generally commit future generations to similar uses; and*
- *Irreversible damage that could result from environmental accidents associated with the project.*

The 2015 General Plan EIR found that implementation would cause the following significant irreversible changes:

- Future development that would be accommodated under the General Plan Update would entail the commitment of nonrenewable and/or slowly renewable energy resources; human resources; and natural resources such as lumber and other forest products, sand and gravel, asphalt, steel, copper, lead, other metals, water, and fossil fuels. Future development would also require the use of natural gas and electricity, petroleum-based fuels, fossil fuels, and water. The commitment of resources required for the construction and operation of future development projects would limit the availability of such resources for future generations or for other uses during the life of the project.
- An increased commitment of social services and public maintenance services (e.g., police, fire, schools, libraries, and sewer and water services) would also be required. The energy and social service commitments would be long-term obligations in view of the low likelihood of returning the land to its original condition once it has been developed.
- Population growth related to project implementation would increase vehicle trips over the long term. Emissions associated with such vehicle trips would continue to contribute to the South Coast Air Basin's nonattainment designation for ozone (O3), fine inhalable particulate matter (PM2.5), and lead (Los Angeles County only) under the California and National ambient air quality standards (AAQS) and nonattainment for coarse inhalable particulate matter (PM10) and nitrogen dioxide (NO2) under the California AAQS.
- Future development in accordance with the General Plan Update is a long-term irreversible commitment of vacant parcels of land or redevelopment of existing developed land in the City's Plan Area.

Similar to the 2015 General Plan EIR findings, the project would require the commitment of nonrenewable energy and/or slowly renewable energy resources both in construction and operation. Additionally, an increased commitment of social services and public maintenance services (e.g., police, fire, schools, libraries, and sewer and water services) would also be required to accommodate the additional housing units in the City. Population growth and emissions would increase due to the increase in housing units in the City. The project would accommodate redevelopment of existing developed land in the City's Plan Area, but would not result in the development of any previously undeveloped parcels.

Given the low likelihood that the land would revert to lower intensity uses or to its current form, similar to the 2015 General Plan update, the project would generally commit future generations to these environmental changes.

4. GROWTH INDUCING IMPACTS OF THE PROPOSED PROJECT

Section 15126.2(e) of the CEQA Guidelines requires a discussion of the ways in which a project could induce growth. This includes ways in which a project would foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Section 12126.2(e) of the CEQA Guidelines states:

> *Discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion of a wastewater treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also discuss the characteristic of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.*

The 2015 General Plan EIR found that buildout in accordance with the Sierra Madre General Plan Update would directly induce growth in the City of Sierra Madre but that given the built-out nature of Sierra Madre, the entire City is already developed with an infrastructure system, including roadways, storm drains, water pipes, solid waste collection systems, and energy/communication lines. Future development that would be accommodated under the General Plan Update would only require additional construction or extension of these infrastructure systems if existing facilities are unable to support buildout as accommodated by the 2015 General Plan. The 2015 General Plan EIR found that buildout of Sierra Madre's roadways per roadway classifications in the proposed General Plan Circulation Element would allow for increased roadway capacity in the City to maintain adequate levels of service.

Similar to the 2015 General Plan, the Housing Element and other associated Land Use Element updates would accommodate additional dwelling units in the City. However, this development would occur in areas already developed with an infrastructure system, including roadways, storm drains, water pipes, solid waste collection systems, and energy/communication lines. Additionally, any new development resulting from the project would be required to pay development impact fees which would help fund any necessary facility construction (new and existing), equipment, and materials.

The 2015 General Plan EIR found that the Sierra Madre General Plan Update would increase population in the City but would not result in substantial population growth given the built-out nature of the City. Current levels of service provided by Sierra Madre's Fire and Police Department would not be adversely impacted by the implementation of the General Plan Update. School services provided by Pasadena Unified School District would also adequately serve the increased student population in Sierra Madre. Library services, provided by Sierra Madre Public Library, would maintain an adequate level of service as well given that the majority of collection items are now available electronically. Future developments in accordance with the 2015 General Plan Update would be required to pay development impact fees which would help fund any necessary facility construction (new and existing), equipment and materials. Therefore, implementation of the 2015 General Plan Update would not result in the need to expand Sierra Madre's public services to maintain desired levels of service. This would be true of the Housing Element and other associated Land Use Element updates. Unlike the 2015 General Plan EIR, the project does not propose any increase in roadway capacity.

The project would accommodate housing development and would potentially increase population in the City by 483 persons. Similar to the findings of the 2015 General Plan EIR, this 4.5 percent increase would not be a substantial increase in population in the City.

The 2015 General Plan EIR found that the Sierra Madre General Plan Update would not encourage or facilitate economic effects that could result in other activities that would significantly affect the environment. The project would not include any increase in commercial development and would potentially result in the construction of residential housing, needed to meet population growth in the Southern California region. Cities and counties in California periodically update their general plans pursuant to California Government Code Sections 65300 et seq. Therefore, approval of the project would not set a precedent that could encourage and facilitate other activities that could significantly affect the environment.

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